CORE RETAS HD

HIGH PERFORMANCE COMPOSITING & RENDERING TOOL

RETAS! PRO is a graphic software which brings epoch-making progress for the animation fields
having been in analog technique so far into the digital realm.
Various functions and easy operation tools bring you the highest quality and efficiency that respond to professionals' strict demands.
Using this software, you can express your own imagination world just easily.
RETAS! PRO is the professional standard software for creation of animation project.

RETAS!PRO Web Site
http://www.retas.com/

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CORE RETAS HD *User Guide*
RP175-101-1-MNL

RETAS! PRO REVOLUTIONARY ENGINEERING
TOTAL ANIMATION SYSTEM

CORE RETAS HD *User Guide*

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CELSYS

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REVOLUTIONARY ENGINEERING
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CORE RETAS HD ***User Guide***

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CONTENTS

Chapter:01

Chapter 1 Introduction

01 About the RETAS!PRO HD series 006
02 Features of CoreRETAS HD 008
03 CoreRETAS HD workflow 010
04 CoreRETAS HD system requirements 012
05 Setup 1: Installing the HASP driver 014
06 Setup 2: Installing the application 020
07 Setup 3: Connecting the dongle 026
08 Setting up the monitor 027

Chapter:02

Chapter 2 Basic description: overview

01 CoreRETAS HD main screens 032
02 About the X-Sheet and stage 036
03 About the cel bank 038
04 About the layer settings 039
05 About the pegbar 040
06 About inbetweening and key frames 042
07 Understanding the scene folder 044
08 Understanding the file browser 054
09 Understanding the shooting X-sheet 064
10 Understanding the stage window 104

Chapter:03

Chapter 3 Basic description: operation

01 Shooting flow 1: FIX (fixed) 116
02 Shooting flow 2: T.U. (track up) 156
03 Shooting flow 3: Follow and SL (slide) 182

Chapter:04

Chapter 4 Application description: shooting

01 About shooting 212
02 Key frames 214
03 Inbetweening 226
04 Auto refresh 264
05 Offsets 268
06 Anchor frame and margins 272
07 Mask mode 274
08 Compositing modes 278
09 Smoothing 286
10 3D camera work 288
11 Color planes 302
12 Seeds 304

Chapter:05

Chapter 5 Application description: Special effects and camera effects

01 Using effects 308
02 List of effects 320
03 Back lighting 394
04 Focus 404
05 Motion blur effects 406
06 Compositing mask processing 408
07 Mask replacement 412
08 Corner pin 418
09 Tiling 420
10 Line width control 421
11 Nesting 422
12 Parent-child pegbars 436
13 Multi-camera 438
14 RLA file reading 442
15 Paraffin overlay and para multi 450
16 Exposure effects 454
17 Image editing 456

Chapter:06

Chapter 6 Application description : Output

01 Preview using still images 488
02 Preview using movie images 490
03 Export 494
04 Batch export of a number of scenes 502
05 Flash format export 506

Chapter:07

Chapter 7 Application description: Settings

01 Setting the preferences 512
02 Editing the shortcuts 519
03 Canceling and re-starting work 520

Chapter:08

Chapter 8 Reference

01 Menus 524
02 Windows 534
03 Shortcuts 576
04 Technical information 580
05 Mouse and pen tablet operation 590
06 Glossary 592
07 User support 598
08 Before contacting this company 599
09 FAQ 600

Explanatory note:

Providing there are no qualifications, the following operations have the same meaning in Windows and Mac OS X.

Ctrl (Ctrl:Windows) : Cmd (Command : Mac OS X)
Alt (Alt:Windows) : Opt (Option : Mac OS X)

Chapter

1

Introduction

In this chapter, an overview of CoreRETAS HD is given, and the methods for setting up are introduced.

Step:01 About the RETAS!PRO HD series
Step:02 Features of CoreRETAS HD
Step:03 CoreRETAS HD workflow
Step:04 CoreRETAS HD system requirements
Step:05 Setup 1: installing the HASP driver
Step:06 Setup 2: installing the application
Step:07 Setup 3: connecting the dongle
Step:08 Setting up the monitor

Step: 01 About the RETAS!PRO HD series

In this step, an explanation is given about the RETAS!PRO HD series.

Next-generation animation production tool RETAS!PRO HD series

RETAS! PRO
CORE RETAS HD
PAINTMAN HD
TRACEMAN HD
STYLOS HD
CELSYS

The RETAS!PRO Series are digital animation production support tools first released in 1993 that allow animation production, which was previously conducted using cels and film, to be carried out on a personal computer. Animation production is divided into a variety of processes including "Drawing, "Finishing (Painting)", and "Shooting(Compositing)", and normally the work for these processes is carried out separately. Matching this "separated" animation production style, the RETAS!PRO Series consists of several tools that have been designed for each function.

Since its initial release, RETAS!PRO has undergone a variety of improvements based on suggestions and opinions from professionals in production workplaces, and has developed into a series of general animation production support tools covering a wide range of animation production processes including drawing, finishing, and shooting. The latest version of the software, the HD Series, corresponds to the 6th generation counting from the release of RETAS!PRO Ver.1.

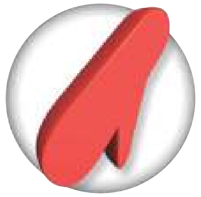
The RETAS!PRO Series is utilized by more than 400 animation production companies and more than 80 educational institutions in Japan, and has also been introduced in various overseas countries, mainly South Korea, China, and the U.S./Canada.

RETAS!PRO HD series product lineup

STYLOS HD

NEW GENERATION VECTOR ANIME TOOL

Digital drawing tool that realizes the ideal drawing sensation.



TRACEMAN HD

IMAGE SCANNING & LINE TRACING TOOL

Scanning and tracing tool that supports Vector tracing function and 48-bit scanning.

PAINTMAN HD

EASY & SPEEDY PAINTING TOOL

Digital painting tool that promises optimum effectiveness and high quality finishing.

CORE RETAS HD

HIGH PERFORMANCE COMPOSITING & RENDERING TOOL

Shooting and compositing tool that satisfies requirements for a variety of expressions and high speed rendering.

Step: 02 Features of CoreRETAS HD

In this step, an explanation is given about the CoreRETAS HD features.

About CoreRETAS HD

RETAS! PRO
CORE RETAS HD
RETAS! PRO
CORE RETAS HD
HIGH PERFORMANCE COMPOSITING & RENDERING TOOL
CELSYS
AWARD

CORE RETAS HD

HIGH PERFORMANCE COMPOSITING & RENDERING TOOL

Shooting and compositing tool that satisfies requirements for a variety of expressions and high speed rendering.

CoreRETAS HD is a tool for carrying out the shooting process in animation production.

The tool allows each of the separate materials such as backgrounds and painted cels to be gathered together at the shooting stage to create one scene. Using X-sheets, CoreRETAS HD allows each of the materials to be arranged in the optimum positions and timing for carrying out the camera work with the addition of a variety of production effects. CoreRETAS HD allows the shooting processes, which were previously carried out using cels and film, to be similarly recreated on the personal computer as a "digital shooting stage".

CoreRETAS HD new functions

Reflecting user suggestions and opinions, various improvements have been made to the previous version of the software, and new functions added, to create CoreRETAS HD as a dedicated animation shooting tool appropriate for the HD age.

New function 1: Enhancement of shooting functions

Motion path, 3D shooting, and multi-camera

A variety of new functions have been added to allow realization of various production effects. These include the "Motion Path" function, in which the camera or cel is moved following straight-line or curved tracks, the "3D Camera Work" function, where layers can be rotated in three dimensions to give backgrounds and cels a three-dimensional effect, and the "Multi-Camera" function, in which a number of cameras can be administered using a single X-sheet.

New function 2: High speed operations

High speed rendering, intelligent cache

A high-speed rendering engine has been newly utilized to selectively speed up processing that previously took time. Using the intelligent cache function, unnecessary rendering has been reduced as much as possible, allowing work to proceed smoothly.

New function 3: Enhancement of special effect functions

Through a wide-ranging enhancement of effect filters and compositing modes, advanced shooting expressions have been made possible.

New function 4: Supporting both raster and vector

In addition to raster drawing, it is now possible to use vector drawing, which is free from the effects of changes in resolution. Support for high resolution HD images and the export of vector images in Flash format is also now possible. The capability to export data to match a variety of applications and resolutions allows realization of one-source, multi-use for data.

New function 5: Other new functions

Other convenient new functions have been added, such as administration functions that allow more effective work among teams, and a function for customizing shortcuts.

Step: 03 CoreRETAS HD workflow

In this step, an explanation is given of the digital shooting flow using CoreRETAS HD.

CoreRETAS reads in animation images created using the RETAS!PRO Series and outputs the final scene with camera work.

Due to the recreation in a window of the X-sheet, which has traditionally been used in the animation industry from the time when film was utilized, it will be possible even for animators who are tackling digital animation for the first time to understand the system instinctively and easily master the operation.

1. Reading in the materials

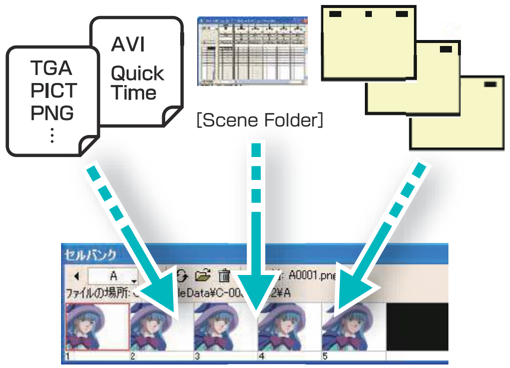
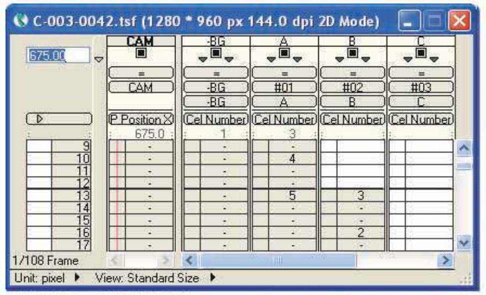


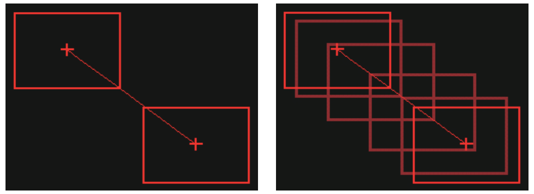
Image file materials are read in to the cel bank. When using other HD Series products, scene folders can be read in directly.

2. Creating the X-sheet



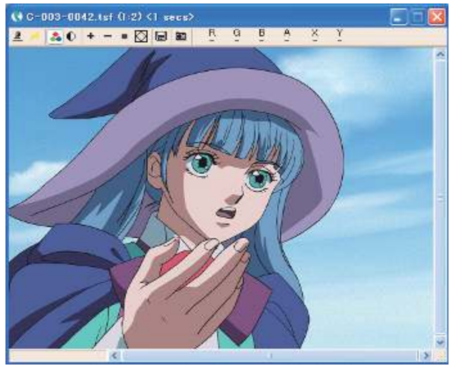
Cel numbers are input using the keyboard to create the X-sheet. In the situation of digital drawing where the X-sheet has already been prepared, this process will not be necessary.

3. Setting the camera and layer movements



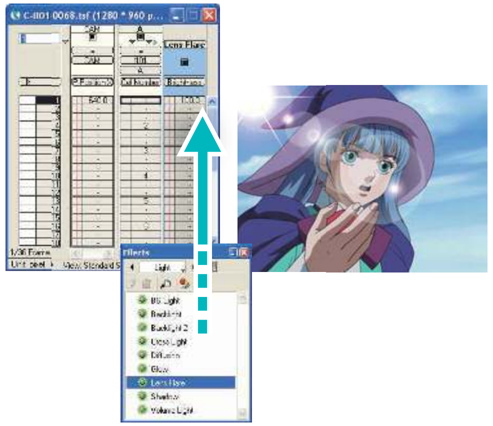
Movement is added to the cameras and layers. For each camera and layer, the "start of movement" and "end of movement" are specified using key frames. The movement between the key frames is automatically divided into segments, and inbetweening is carried out to create the camera and layer frames required to complement the key frames. A variety of inbetweening modes, such as [Acceleration], [Deceleration] and [Sine Curve], can be selected.

4. RAM preview



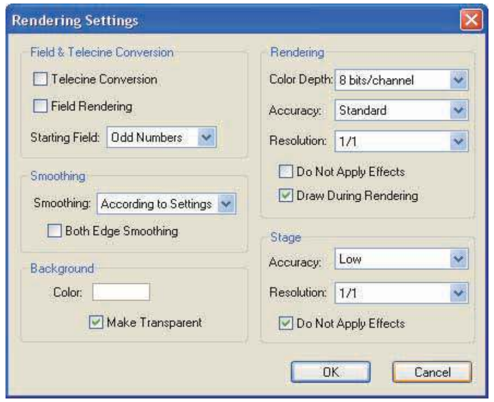
Using the [RAM Preview] function, it is possible to proceed with work while confirming the correct timing and camera work.

5. Special effects



When special effects are required, [Effects] are added to layers and cameras.

6. Rendering settings



Rendering Settings

Field & Telecine Conversion
☐ Telecine Conversion
☐ Field Rendering
Starting Field: Odd Numbers

Smoothing
Smoothing: According to Settings
☐ Both Edge Smoothing

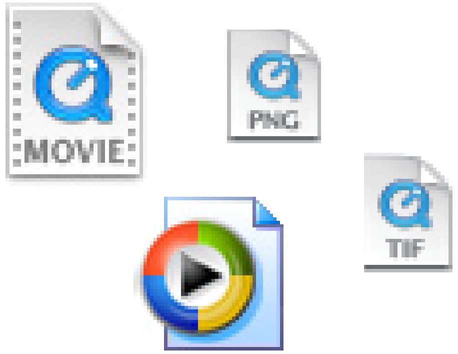
Background
Color:
☑ Make Transparent

Rendering
Color Depth: 8 bits/channel
Accuracy: Standard
Resolution: 1/1
☐ Do Not Apply Effects
☑ Draw During Rendering

Stage
Accuracy: Low
Resolution: 1/1
☑ Do Not Apply Effects

Rendering-related settings, such as the rendering accuracy and telecine (24 to 30 frame) conversion, are carried out.

7. Export



The animation can be exported as a movie or as a series of sequential still image files.

Step: 04

CoreRETAS HD system requirements

In this step, an explanation is given of the system requirements for CoreRETAS HD.

Windows version

OS	Microsoft Windows English Operating System (OS) 2000 Professional (Service Pack2 or higher necessary) XP Home Edition XP Professional *1 Internet Explorer 5.01 or higher necessary. *2 DirectX 8.0 or higher recommended. *3 QuickTime 6.0 or higher recommended.
CPU unit	PC/AT compatible machines only. Personal computers with the above mentioned OS preinstalled. *1 Environment where the above mentioned OS operates comfortably. *2 Computers not guaranteed by its manufacturer may not be supported.
CPU	Intel® Pentium® or compatible processor 800 MHz or higher (2.0 GHz or higher recommended)
Memory (**1)	512 MB or more necessary (1.0 GB or more recommended)
Free space on HDD (**1)	3.0 GB or more necessary (6.0 GB or more recommended) For installation of application : Approximately 100 MB For data and installation of dependent applications : Approximately 500 MB As work space : 2.5 GB or more
Monitor	XGA (1024x768) or higher resolution display, full-color (24 bits, 16.7 million colors)
Graphics tablet (**2)	WACOM tablet FAVO, Intuos, Cintiq, PL series, etc.
Supported input format	Image : BMP, CEL, DGA, LIF, PICT (*5), PNG, PSD, RLA, SGI, SKF, SOFTIMAGE, SVD (*1), TARGA, TIFF (*2) Video : AVI (*4), QuickTime (*5) Audio : AIFF (*3/*5), WAV (*3/*5) *1 Rasterized after loading. *2 LZW compression unsupported. *3 Compression unsupported. *4 DirectX 8.0 or higher necessary. *5 QuickTime 6.0 or higher necessary.
Supported output format	Image : BMP, PICT (*3), PNG, RAW, SGI, SOFTIMAGE, TARGA, TIFF (*1), YUV Video : AVI (*2), FLASH, QuickTime (*3) *1 LZW compression unsupported. *2 DirectX 8.0 or higher necessary. *3 QuickTime 6.0 or higher necessary.
CD-ROM drive	CD-ROM (or DVD-ROM) drive necessary for installing the applications
USB port	Necessary for dongle connection *1 Only USB port built-in on the motherboard supported. Cannot be used with expansion USB ports implemented using third-party PCI cards.

**1 May differ depending on the system requirements.
**2 System requirements for using graphics tablet. Use of graphics tablet is optional.

Mac OS X version

OS	Mac OS X English Operating System (OS) 10.3 (10.3.9) 10.4 (10.4.5 or higher)
CPU unit	Macintosh computer with PowerPC G5 or G4 processor Power Mac G5/G4, iMac, eMac, Mac mini, PowerBook G4, iBook, etc. *1 Environment where the above mentioned OS operates comfortably. *2 Computers not guaranteed by its manufacturer may not be supported.
CPU	PowerPC with G5 or G4 processor 800 MHz or higher (1.5 GHz or higher recommended)
Memory (**1)	512 MB or more necessary (1.0 GB or more recommended)
Free space on HDD (**1)	3.0 GB or more necessary (6.0 GB or more recommended) For installation of application : Approximately 100 MB For data and installation of dependent applications : Approximately 500 MB As work space : 2.5 GB or more
Monitor	XGA (1024x768) or higher resolution display, full-color (24 bits, 16.7 million colors)
Graphics tablet (**2)	WACOM tablet FAVO, Intuos, Cintiq, PL series, etc.
Supported input format	Image : BMP, CEL, DGA, PICT, PNG, PSD, RLA, SGI, SKF, SOFTIMAGE, SVD (*1), TARGA, TIFF (*2) Video : QuickTime Audio : AIFF (*3), WAV (*3) *1 Rasterized after loading. *2 LZW compression unsupported. *3 Compression unsupported.
Supported output format	Image : BMP, PICT, PNG, RAW, SGI, SOFTIMAGE, TARGA, TIFF (*1), YUV Video : FLASH, QuickTime *1 LZW compression unsupported.
CD-ROM drive	CD-ROM (or DVD-ROM) drive necessary for installing the applications
USB port	Necessary for dongle connection *1 Only USB port built-in on the motherboard supported. Cannot be used with expansion USB ports implemented using third-party PCI cards.

**1 May differ depending on the system requirements.
**2 System requirements for using graphics tablet. Use of graphics tablet is optional.

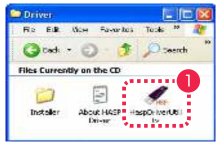
Step: 05 Setup 1: installing the HASP driver

In this step, an explanation is given about how to install and uninstall the HASP driver.

Installing the Windows version HASP driver

1. Inserting the CD-ROM

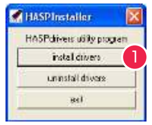
Insert the RETAS!PRO [Application Disc] into the computer being used.


Driver
File Edit View Favorites Tools
Back Search
Files Currently on the CD
Installer
About HASP Driver
HaspDriverUtility
❶

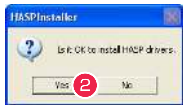
❶ Double-click on the [HASPDriverUtility.exe] file in the [Driver] folder on the RETAS!PRO [Application Disc].

2. Installation

The installer dialog boxes will be displayed in turn.


HASPInstaller
HASPdrivers utility program
install drivers
uninstall drivers
exit
❶

❶ Select [install drivers].

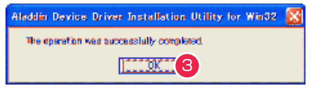

HASPInstaller

Is it OK to install HASP drivers.

Yes
No
❷

❷ Click the "Yes" button.

* The above shows the situation when using Windows XP SP2. The display situation will differ depending on which OS version is being used.


Aladdin Device Driver Installation Utility for Win32

The operation was successfully completed.

OK
❸

❸ When the above screen is shown, click the [OK] button. This completes the installation.

3. Restarting Windows

After the installation of the [HASP Driver] has been completed, restart Windows.

POINT

Installation authorization

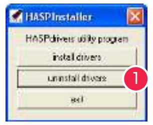
Be sure to carry out the installation under the authorization of [System Administrator].

Connecting the dongle

Do not connect the dongle until after the CoreRETAS HD [Application] and [HASP Driver] software have been installed.

Uninstalling the Windows version HASP driver

In situations where there is a problem with the HASP driver for any reason, it may be possible to fix the problem by reinstalling the HASP driver. Before reinstalling the driver, first uninstall the HASP driver software.


HASPInstaller
HASPdrivers utility program
install drivers
uninstall drivers
exit
❶

❶ Double-click on the [HASPDriverUtility.exe] file in the [Driver] folder on the RETAS!PRO [Application Disc]. When the dialog box shown above appears, select [uninstall drivers] and follow the instructions given on the screen.

POINT

Installation authorization

Be sure to carry out the installation under the authorization of [System Administrator].

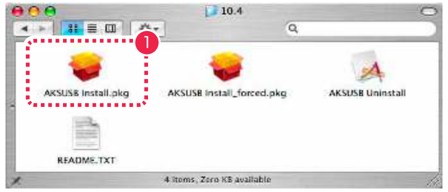
Connecting the dongle

Do not connect the dongle until after the CoreRETAS HD [Application] and [HASP Driver] software have been installed.

Installing the Mac OS X version HASP driver

1. Inserting the CD-ROM

Insert the RETAS!PRO [Application Disc] into the Macintosh being used.

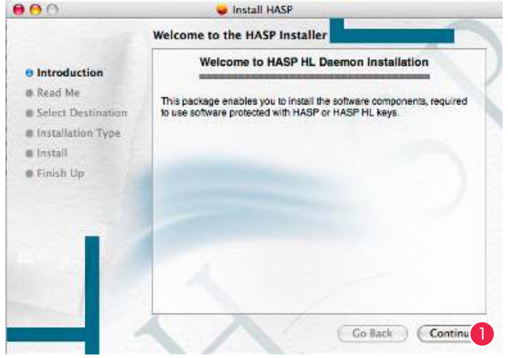


10.4
①
AKSUSB Install.pkg
AKSUSB Install_forced.pkg
AKSUSB Uninstall
README.TXT
4 items, Zero KB available

① Double-click on the [AKSUSB install.pkg] file in a folder the OS using in the [Driver] folder.

2. Installation

The following installer dialog boxes will be displayed in turn.



Install HASP

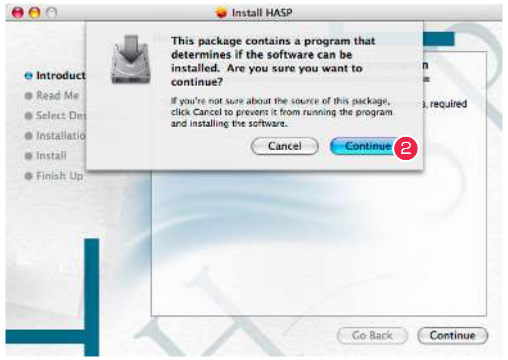
Welcome to the HASP Installer

Welcome to HASP HL Daemon Installation

This package enables you to install the software components, required to use software protected with HASP or HASP HL keys.

Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Go Back
Continu
①

① Click the [Continue] button.



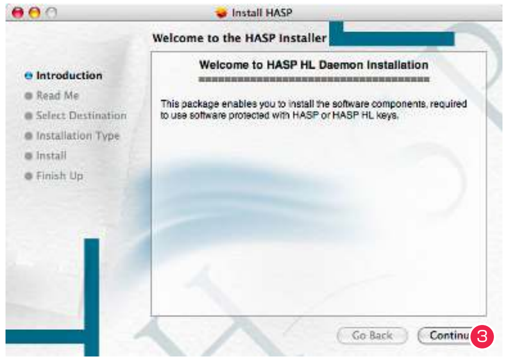
Install HASP

This package contains a program that determines if the software can be installed. Are you sure you want to continue?

If you're not sure about the source of this package, click Cancel to prevent it from running the program and installing the software.

Introduct
Read Me
Select Des
Installatio
Install
Finish Up
Cancel
Continue
②
Go Back
Continue

② Click the [Continue] button.



Install HASP

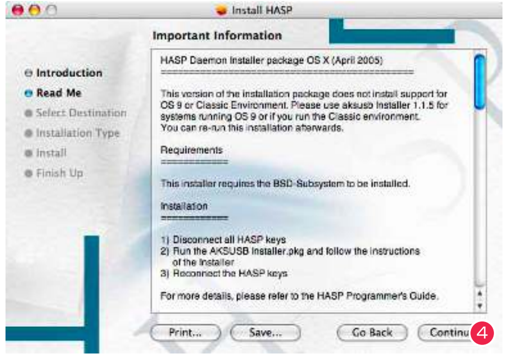
Welcome to the HASP Installer

Welcome to HASP HL Daemon Installation

This package enables you to install the software components, required to use software protected with HASP or HASP HL keys.

Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Go Back
Continu
③

③ Click the [Continue] button.



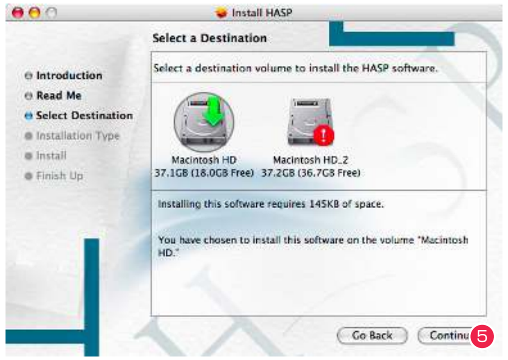
Install HASP

Important Information

```
HASP Daemon Installer package OS X (April 2005)
===============================================

This version of the installation package does not install support for
OS 9 or Classic Environment. Please use aksusb Installer 1.1.5 for
systems running OS 9 or if you run the Classic environment.
You can re-run this installation afterwards.

Requirements
============

This installer requires the BSD-Subsystem to be installed.

Installation
============

1) Disconnect all HASP keys
2) Run the AKSUSB Installer.pkg and follow the instructions
   of the Installer
3) Reconnect the HASP keys

For more details, please refer to the HASP Programmer's Guide.
```

Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Print...
Save...
Go Back
Continu
④

④ Confirm the usage license, then click the [Continue] button.



Install HASP

Select a Destination

Select a destination volume to install the HASP software.

Macintosh HD 37.1GB (18.0GB Free)

Macintosh HD_2 37.2GB (36.7GB Free)

Installing this software requires 145KB of space.

You have chosen to install this software on the volume "Macintosh HD."

Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Go Back
Continu
⑤

⑤ Select the installation disc volume, and click the [Continue] button.

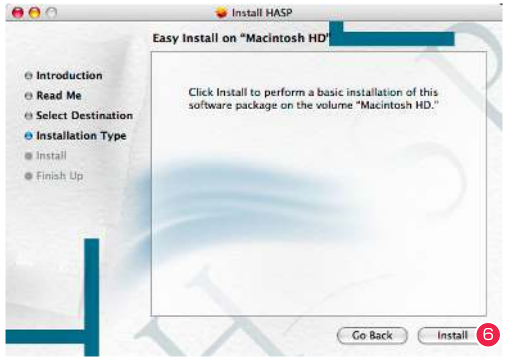
POINT

Installation authorization

Be sure to carry out the installation under the authorization of [System Administrator].

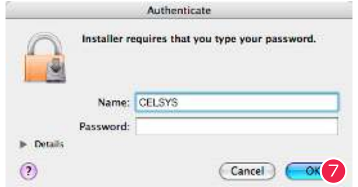
Connecting the dongle

Do not connect the dongle until after the CoreRETAS HD [Application] and [HASP Driver] software have been installed.


Install HASP
Easy Install on "Macintosh HD"
Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Go Back
Install
⑥

Click Install to perform a basic installation of this software package on the volume "Macintosh HD."

⑥ Click the [Install] button.

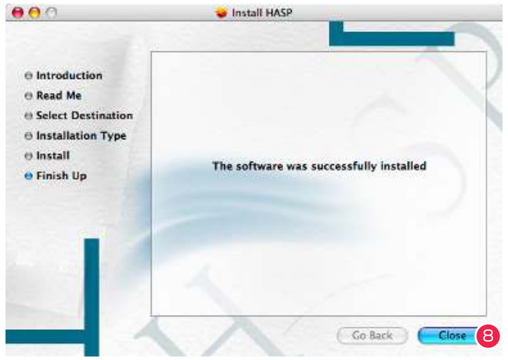

Authenticate
Details
Cancel
OK
⑦

Installer requires that you type your password.

Name: CELSYS

Password:

⑦ Input the system administrator [Name] and [Password] of the computer being used, and click the [OK] button.


Install HASP
Introduction
Read Me
Select Destination
Installation Type
Install
Finish Up
Go Back
Close
⑧

The software was successfully installed

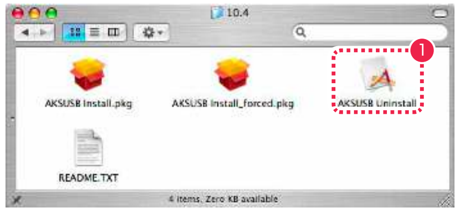
⑧ Click the [Close] button to complete the installation.

3. Restarting Mac OS X

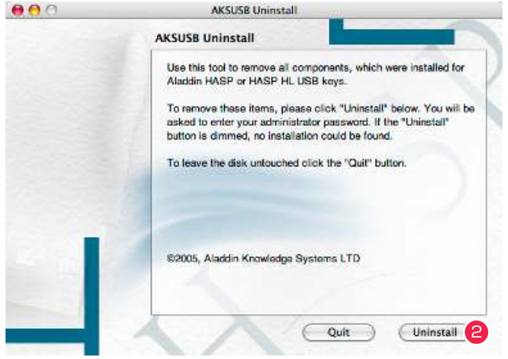
After the successful completion of the installation, restart Mac OS X.

Uninstalling the Mac OS X version HASP driver

In situations where there is a problem with the HASP driver for any reason, it may be possible to restore the situation by reinstalling the HASP driver. Before reinstalling the driver, first uninstall the HASP driver software.


10.4
AKSUSB Install.pkg
AKSUSB Install_forced.pkg
AKSUSB Uninstall
README.TXT
4 items, Zero KB available
①

① Double-click on the [AKSUSB Uninstall] file in a folder the OS using in the [Driver] folder on the RETAS!PRO [Application Disc] to start up the uninstaller.


AKSUSB Uninstall
AKSUSB Uninstall
Quit
Uninstall
②

Use this tool to remove all components, which were installed for Aladdin HASP or HASP HL USB keys.

To remove these items, please click "Uninstall" below. You will be asked to enter your administrator password. If the "Uninstall" button is dimmed, no installation could be found.

To leave the disk untouched click the "Quit" button.

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② When the dialog box is displayed, click the [Uninstall] button to uninstall the driver software.

POINT

Installation authorization

Be sure to carry out the installation under the authorization of [System Administrator].

Connecting the dongle

Do not connect the dongle until after the CoreRETAS HD [Application] and [HASP Driver] software have been installed.

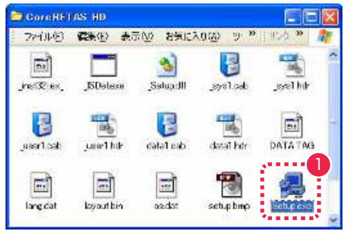
Step: 06

Setup 2: installing the application

In this step, an explanation is given about how to install and uninstall the CoreRETAS HD application software.

Installing the Windows version application

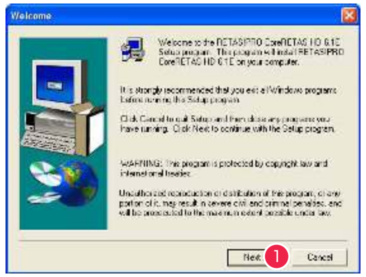
1. Starting up the installer


CoreRETAS HD
inst32i.ex
_ISDel.exe
_Setup.dll
_sys1.cab
_sys1.hdr
_user1.cab
_user1.hdr
data1.cab
data1.hdr
DATA.TAG
lang.dat
layout.bin
os.dat
setup.bmp
Setup.exe
1

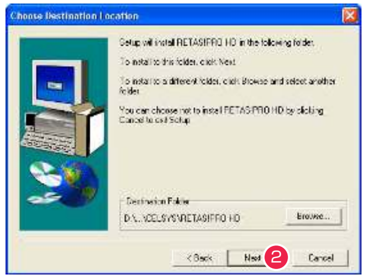
① Double-click on the [Setup.exe] file in the [CoreRETAS HD] folder on the RETAS!PRO [Application Disc] to start up the installer.

2. Setting the installer

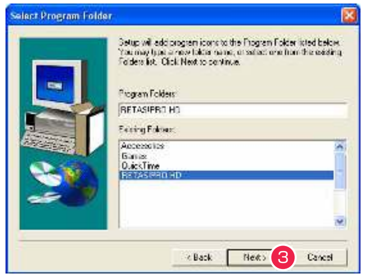
When the installer is started up, the following windows will be displayed in turn.


Welcome
Next
1
Cancel

① Click the [Next] button. To abort the installation, click the [Cancel] button.


Choose Destination Location
Destination Folder
Browse...
< Back
Next
2
Cancel

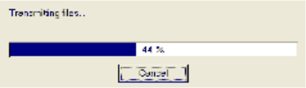
② Next, specify the RETAS!PRO installation destination. The software will be installed in the folder specified here. Then click the [Next] button.


Select Program Folder
Program Folders:
RETAS!PRO HD
Existing Folders:
Accessories
Games
QuickTime
RETAS!PRO HD
< Back
Next
3
Cancel

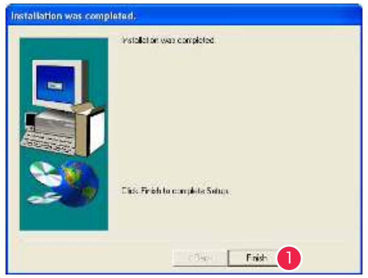
③ Determine the position in the Start Menu. The software will be installed in the position specified here. Then click the [Next] button.

3. Installation

The installation will be implemented.


Transcribing files...
44 %
Cancel

4. Finishing the installation


Installation was completed.
Installation was completed.
Click Finish to complete Setup.
< Back
Finish
1

A dialog box will be displayed when the installation has been completed without problems.

① Click the [Finish] button to close down the installer.
After the application installation is finished, restart Windows. This completes the installation.

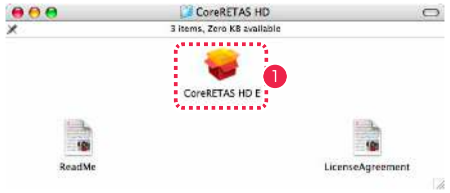
POINT

Install the application in the directory specified as the default.

When installing the RETAS!PRO HD Series applications, unless there is a particular reason for not doing so, it is recommended to install the applications in the directory specified as the default.

Installing the Mac OS X version application

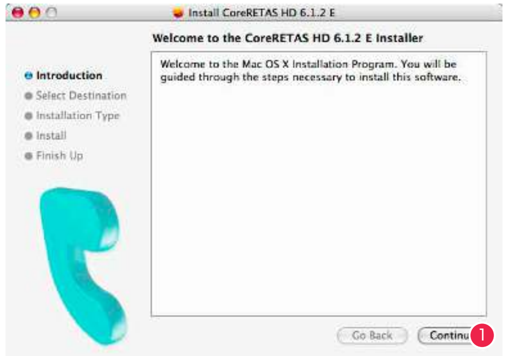
1. Starting up the installation program


CoreRETAS HD
3 items, Zero KB available
CoreRETAS HD E
①
ReadMe
LicenseAgreement

① Double-click on the [CoreRETAS HD.pkg] file in the [CoreRETAS HD] folder on the RETAS!PRO [Application Disc] to start up the installer.

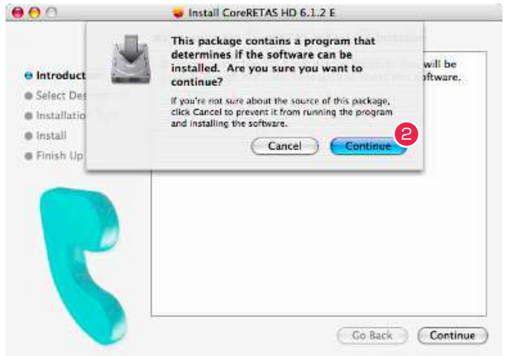
2. Installation options

When the installer is started up, the following windows will be displayed.


Install CoreRETAS HD 6.1.2 E
Welcome to the CoreRETAS HD 6.1.2 E Installer
Introduction
Select Destination
Installation Type
Install
Finish Up
Go Back
Continue
①

Welcome to the Mac OS X Installation Program. You will be guided through the steps necessary to install this software.

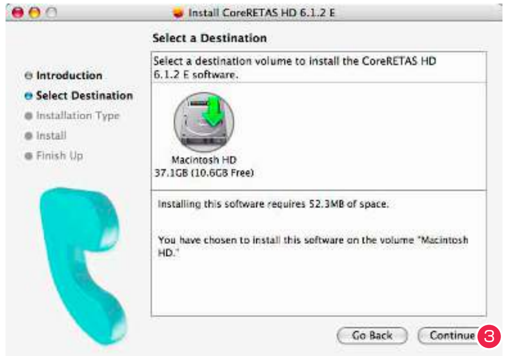
① Click the [Continue] button.


Install CoreRETAS HD 6.1.2 E
Introduct
Select Des
Installatio
Install
Finish Up
Cancel
Continue
②
Go Back
Continue

This package contains a program that determines if the software can be installed. Are you sure you want to continue?

If you're not sure about the source of this package, click Cancel to prevent it from running the program and installing the software.

② Click the [Continue] button.

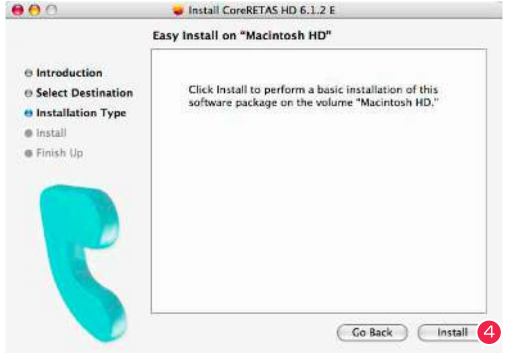

Install CoreRETAS HD 6.1.2 E
Select a Destination
Introduction
Select Destination
Installation Type
Install
Finish Up
Macintosh HD
37.1GB (10.6GB Free)
Go Back
Continue
③

Select a destination volume to install the CoreRETAS HD 6.1.2 E software.

Installing this software requires 52.3MB of space.

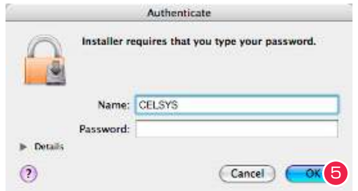
You have chosen to install this software on the volume "Macintosh HD."

③ Next, specify the RETAS!PRO installation destination. The software will be installed in the [Applications] folder on the hard disk volume specified here. After selection, click the [Continue] button.


Install CoreRETAS HD 6.1.2 E
Easy Install on "Macintosh HD"
Introduction
Select Destination
Installation Type
Install
Finish Up
Go Back
Install
④

Click Install to perform a basic installation of this software package on the volume "Macintosh HD."

④ Click the [Install] button.


Authenticate
Details
Cancel
OK
⑤

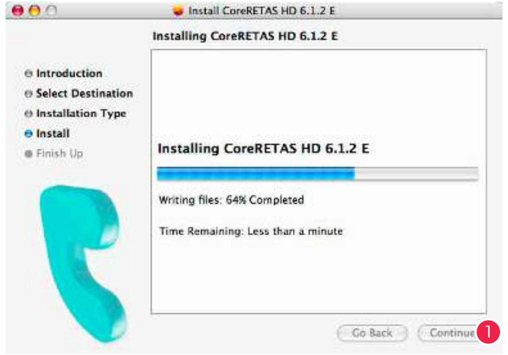
Installer requires that you type your password.

Name: CELSYS

Password:

⑤ Input the system administrator [Name] and [Password] of the installation computer and click the [OK] button.

3. Installation



Install CoreRETAS HD 6.1.2 E

Installing CoreRETAS HD 6.1.2 E

Installing CoreRETAS HD 6.1.2 E

Writing files: 64% Completed

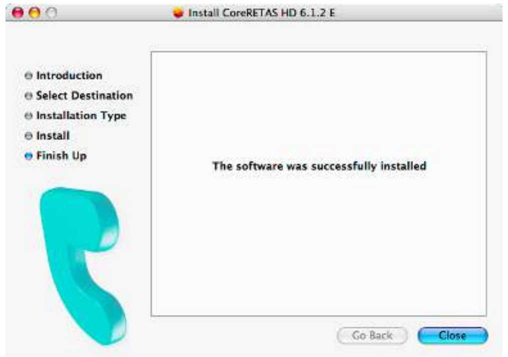
Time Remaining: Less than a minute

Introduction
Select Destination
Installation Type
Install
Finish Up
Go Back
Continue
①

① The installation will be implemented.

4. Finishing the installation

After the successful completion of the installation, restart Mac OS X.



Install CoreRETAS HD 6.1.2 E

The software was successfully installed

Introduction
Select Destination
Installation Type
Install
Finish Up
Go Back
Close

POINT

Install the application in the directory specified as the default.

When installing the RETAS!PRO HD Series applications, unless there is a particular reason for not doing so, it is recommended to install the applications in the directory specified as the default.

Step:
07

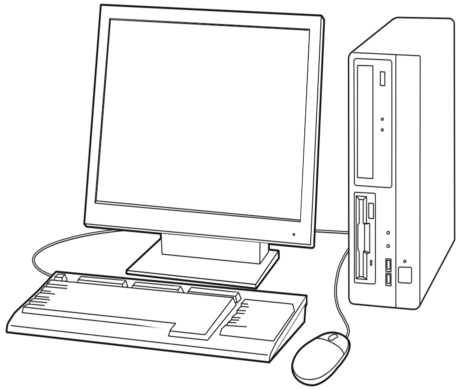
Setup 3: connecting the dongle

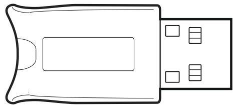
In this step, an explanation is given about connecting the dongle.

Connecting the dongle

1. Mounting

After the installation of the software and HASP driver has been completed, insert the dongle in the USB port, making sure it is securely connected. When the product key has been correctly connected and is recognized after starting up the computer, the dongle lamp (LED) will light.





In the situation where the dongle is not correctly recognized...

In a case where the dongle is not correctly recognized, remove the dongle from the USB port and confirm the following.

- Is the dongle securely connected to the USB port?
- Is the USB port of the computer set in a condition where it can be used? Has it failed?
  (Concerning the operation of the USB port, refer to the manual that accompanies the equipment)

In the situation where the dongle is still not recognized after confirming the above, uninstall the HASP driver and then re-install it. Note that after re-installing the driver, the OS should be restarted.

POINT

- When removing and inserting the dongle, carry out the operation while the computer power is off. If the dongle is removed or inserted while the power is on, there will be a danger of breakage.
- Take great care with the administration and storage of the dongle. Once the dongle has been mounted, try as far as possible not to disconnect it.
- The dongle can only be connected to USB ports on the mother board. Note that it cannot be used in environments where USB ports have been installed using a third party PCI card.
- If the dongle breaks and a new one is required, please contact the sales agent where you purchased the software.

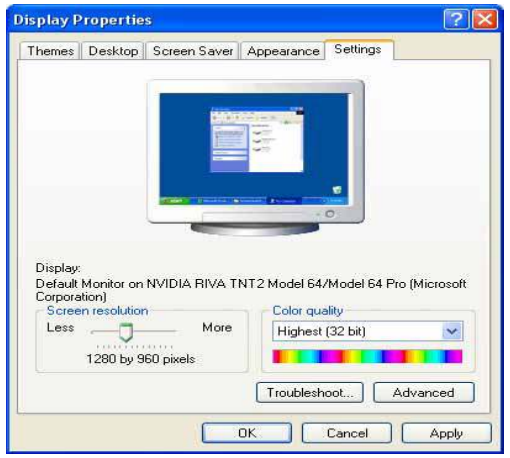
Step:
08

Setting up the monitor

In this step, an explanation is given about how to set up the monitor.

Windows version

To change the screen displayed colors, use [Display] in the [Control Panel]. Double-clicking on the [Display] icon displays the window shown below. Using the tabs, select [Display Settings].


Display Properties
Themes
Desktop
Screen Saver
Appearance
Settings
Less
More
Troubleshoot...
Advanced
OK
Cancel
Apply

Display:
Default Monitor on NVIDIA RIVA TNT2 Model 64/Model 64 Pro (Microsoft Corporation)

Screen resolution: 1280 by 960 pixels

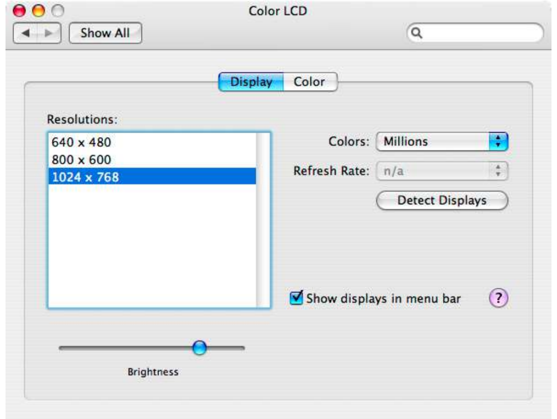
Color quality: Highest (32 bit)

Example (Situation in Windows XP Professional)

The contents shown in [Display Settings] will differ according to the system being used. Use the pull-down menu to change the number of displayed colors to 16.7 million (24 bit) or more.

Mac OS X version

To change the screen displayed colors, use [Display] in [System Preferences]. When [Display] is clicked, the following window will be shown.


Color LCD
Show All
Display
Color
Detect Displays
Brightness

Resolutions:
640 x 480
800 x 600
1024 x 768

Colors: Millions

Refresh Rate: n/a

☑ Show displays in menu bar

In the display colors list, the number of colors that can be displayed on the current screen will be shown, so select [Millions]. This will allow switching of the monitor to full color display.

Chapter

2

Basic description: overview

In this chapter, an overview is given of CoreRETAS HD.

Step:01 CoreRETAS HD main screens

Step:02 About the X-sheet and stage

Step:03 About the cel bank

Step:04 About the layer settings

Step:05 About the pegbar

Step:06 About inbetweening and key frames

Step:07 Understanding the scene folder

Step:08 Understanding the file browser

Step:09 Understanding the shooting X-sheet

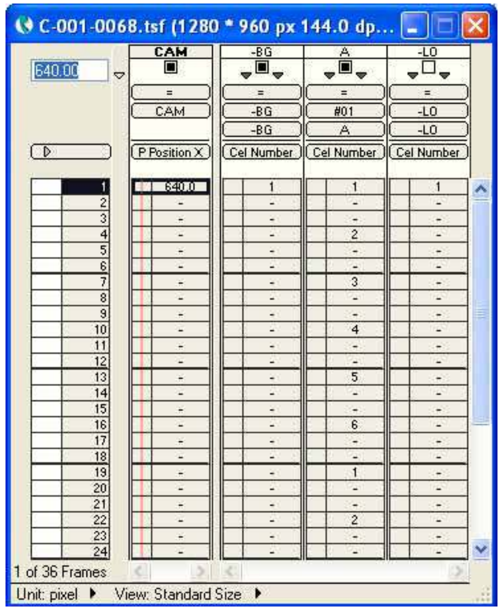
Step:10 Understanding the stage window

Step: 01

CoreRETAS HD main screens

In this step, the windows and palettes used in CoreRETAS HD are introduced.

Shooting X-sheet window

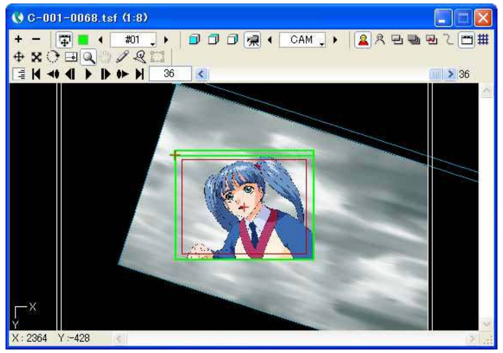

C-001-0068.tsf (1280 * 960 px 144.0 dp...

1 of 36 Frames

Unit: pixel View: Standard Size

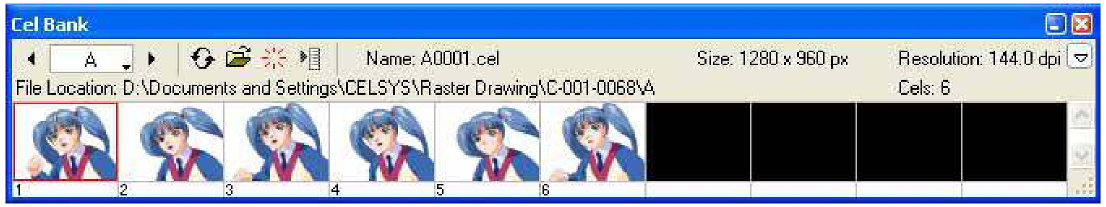
The [X-sheet] window is the window that forms the core of work using CoreRETAS HD. It controls the timing and layering of each layer.
There are [2D Mode] X-sheets, which maintain compatibility with previous versions of CoreRETAS, and [3D Mode] X-sheets that realize a three-dimensional type of camera work.

Stage window


C-001-0068.tsf (1:8)

This window is used to implement camera work while controlling parameters such as [Movement], [Zoom In/Zoom Out] and [Rotation] for [Backgrounds] and [Cels] arranged on the stage.

Cel bank palette

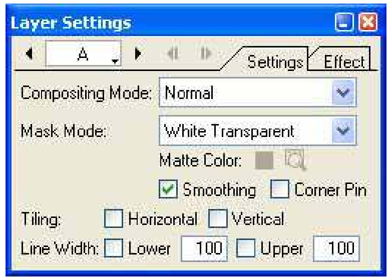

Cel Bank

Name: A0001.cel Size: 1280 x 960 px Resolution: 144.0 dpi

File Location: D:\Documents and Settings\CELSYS\Raster Drawing\C-001-0068\A Cels: 6

This palette administers all image data used in the scene.
It is also possible to generate [Color Planes] filled with monochrome colors.

Layer settings palette


Layer Settings

Compositing Mode: Normal

Mask Mode: White Transparent

Matte Color:

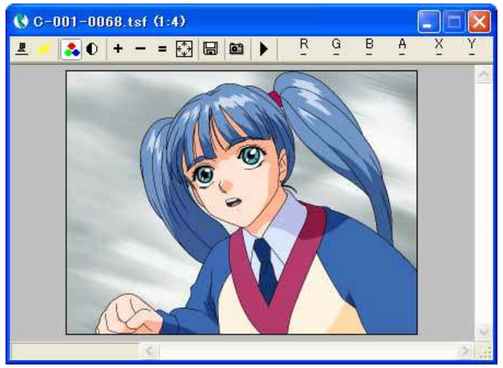
☑ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 100 ☐ Upper 100

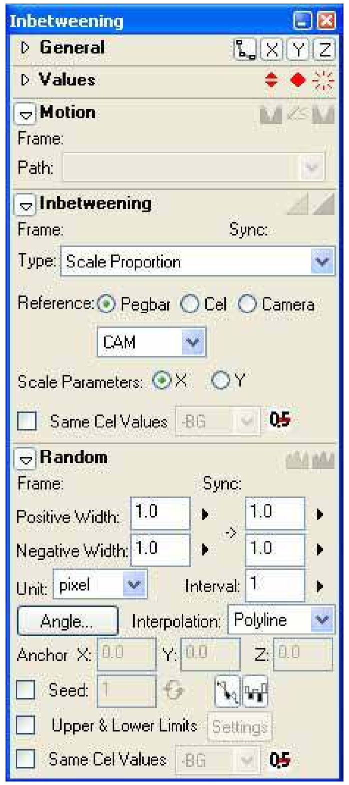
This palette allows various settings to be made relating to layers, such as [Compositing Mode], [Mask Mode], and [Projection Mode].

Rendering window


C-001-0068.tsf (1:4)

This window displays the image captured by the camera according to the X-sheet and stage settings.

Inbetweening palette



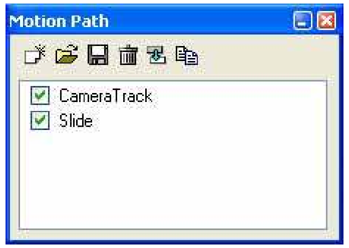
Frame:
Path:

Inbetweening
Frame: Sync:
Type: Scale Proportion
Reference: ● Pegbar ○ Cel ○ Camera
CAM
Scale Parameters: ● X ○ Y
☐ Same Cel Values -BG 0.5

Random
Frame: Sync:
Positive Width: 1.0 -> 1.0
Negative Width: 1.0 1.0
Unit: pixel Interval: 1
Interpolation: Polyline
Anchor X: 0.0 Y: 0.0 Z: 0.0
☐ Seed: 1
☐ Upper & Lower Limits
☐ Same Cel Values -BG 0.5

This palette allows setting of key frames to [Cameras], [Pegbars], and [Layers], and enables inbetweening to be carried out using a variety of settings such as [Acceleration], [Deceleration], [Sine Curve] and [Polynomial].

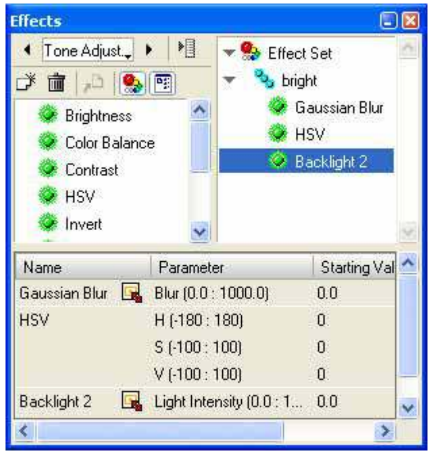
Motion path palette



☑ CameraTrack
☑ Slide

This palette allows straight or curved lines to be drawn on the stage, and for the camera or layer to be moved along these tracks (motion path).

Effects palette



- Brightness
- Color Balance
- Contrast
- HSV
- Invert

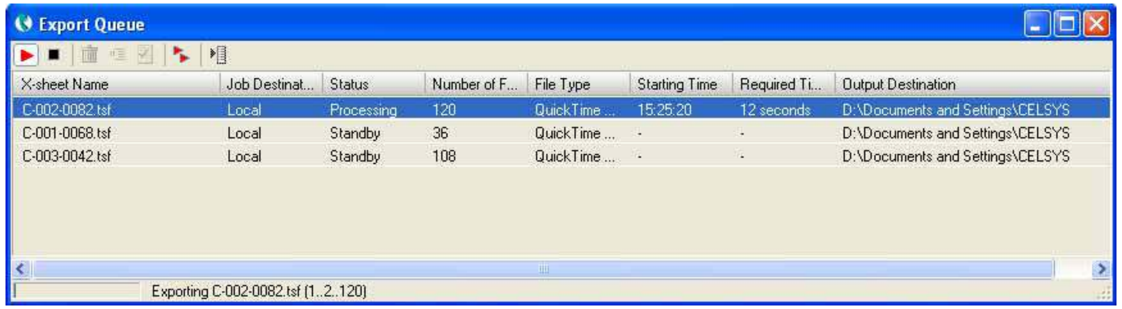
- Effect Set
  - bright
    - Gaussian Blur
    - HSV
    - Backlight 2

Name	Parameter	Starting Val
Gaussian Blur	Blur (0.0 : 1000.0)	0.0
HSV	H (-180 : 180)	0
	S (-100 : 100)	0
	V (-100 : 100)	0
Backlight 2	Light Intensity (0.0 : 1...	0.0

This palette allows administration of effects when applying special effects.

It is also possible to group together a number of effects and use them as an [Effects Set].

Export queue window



X-sheet Name	Job Destinat...	Status	Number of F...	File Type	Starting Time	Required Ti...	Output Destination
C-002-0082.tsf	Local	Processing	120	QuickTime ...	15:25:20	12 seconds	D:\Documents and Settings\CELSYS
C-001-0068.tsf	Local	Standby	36	QuickTime ...	-	-	D:\Documents and Settings\CELSYS
C-003-0042.tsf	Local	Standby	108	QuickTime ...	-	-	D:\Documents and Settings\CELSYS

Exporting C-002-0082.tsf (1..2..120)

When carrying out batch export of several scenes, this window shows a list of the scenes that are being exported. This window allows the jobs in the export queue to be executed and aborted.

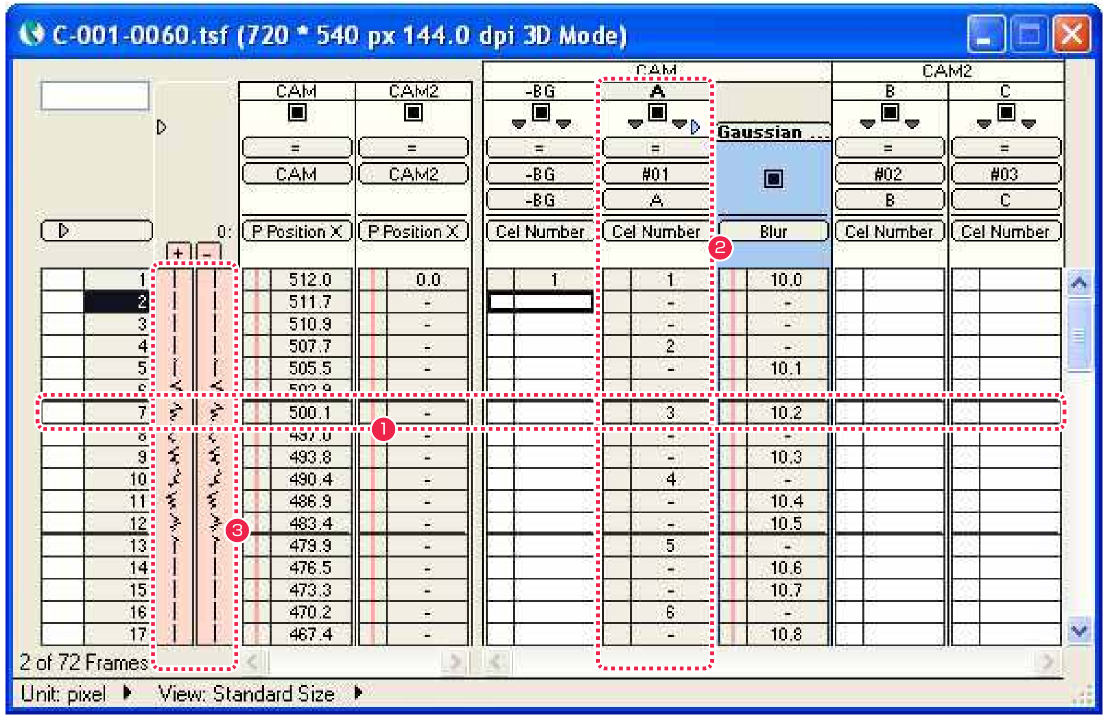
Step: 02

About the X-sheet and stage

In this step, an overview is given of the X-sheet and stage.

X-sheet window

The [X-sheet] window controls the [Layering] order and the [Timing] of the cels. Because the window utilizes the design of a traditional X-sheet, used as the standard in the animation industry, it can be instinctively understood by users.
X-sheets created by [STYLOS HD], [TraceMan HD], and [PaintMan HD] can be used as they are simply by utilizing the [Save As...] command to save them as CoreRETAS HD X-sheets.
Since it is possible to open the same X-sheet in several windows, it will also be an easy matter to confirm the situation between greatly separated frames. It is also possible to paste sound files into the X-sheet and to confirm the synchronization condition between the sound and images.



C-001-0060.tsf (720 * 540 px 144.0 dpi 3D Mode)

	CAM	CAM2	CAM			CAM2	
	CAM	CAM2	-BG	A	Gaussian ...	B	C
	CAM	CAM2	-BG -BG	#01 A		#02 B	#03 C
0:	P Position X	P Position X	Cel Number	Cel Number	Blur	Cel Number	Cel Number
1	512.0	0.0	1	1	10.0		
2	511.7	-		-	-		
3	510.9	-		-	-		
4	507.7	-		2	-		
5	505.5	-		-	10.1		
6	502.9						
7	500.1	-		3	10.2		
8	497.0	-		-	-		
9	493.8	-		-	10.3		
10	490.4	-		4	-		
11	486.9	-		-	10.4		
12	483.4	-		-	10.5		
13	479.9	-		5	-		
14	476.5	-		-	10.6		
15	473.3	-		-	10.7		
16	470.2	-		6	-		
17	467.4	-		-	10.8		

2 of 72 Frames

Unit: pixel View: Standard Size

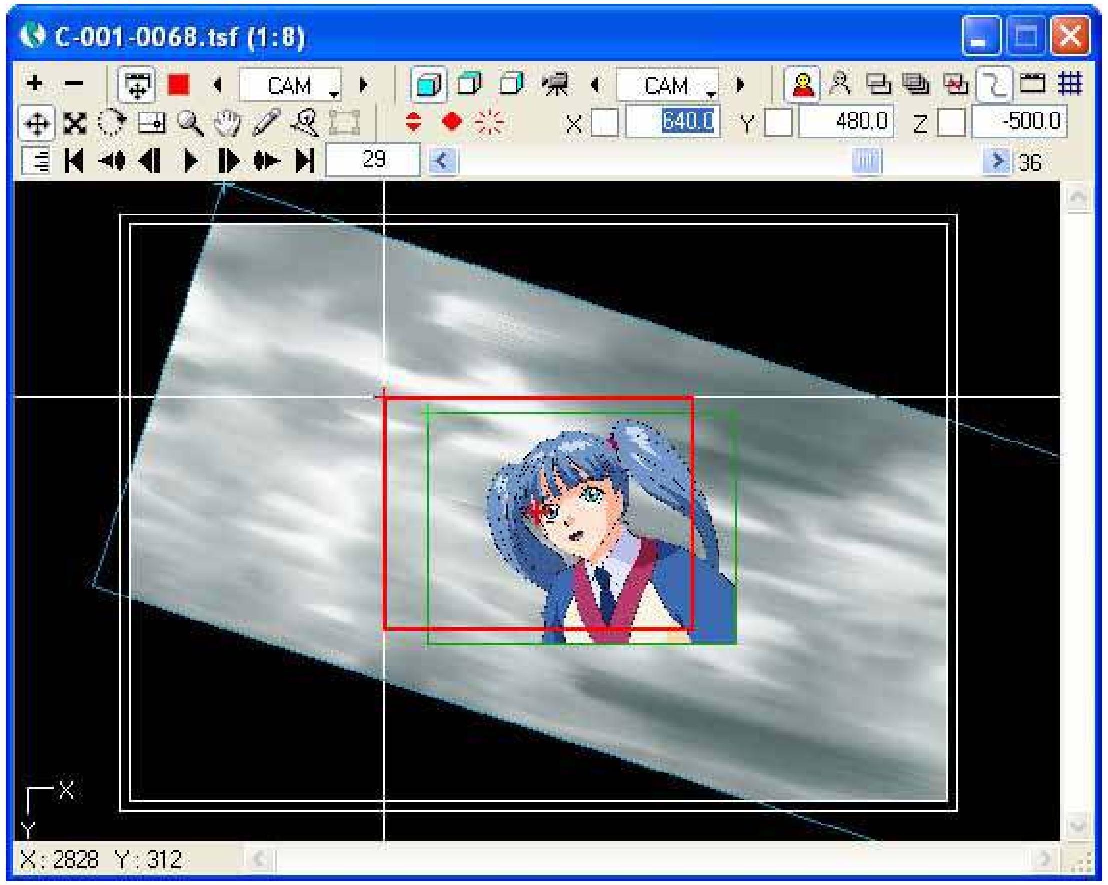
① **Frame**
Each of the rows stretching horizontally across the X-sheet is known as a [Frame]. Frames are counted in order from the top as the [1st Frame], [2nd Frame], etc.

② **Layer**
Each of the columns stretching vertically up and down the X-sheet is known as a [Layer]. These columns specify the order of layering the images. Layers to the left are lower, and layers to the right are higher.

③ **Sound Layer**
Sound files can be read in to the [Sound Layer].
It is also possible to change the sound file starting position.

Stage window

In order for shooting to be carried out, the [Background] and [Cel] materials and camera are arranged in the window known as the [Stage].
The materials arranged on the stage can be freely controlled regarding [Movement], [Rotation], and [Zoom In/Zoom Out].
Using the [Pegbar] function, the materials on the stage can be grouped together.



C-001-0068.tsf (1:8)

CAM CAM

X 640.0 Y 480.0 Z -500.0

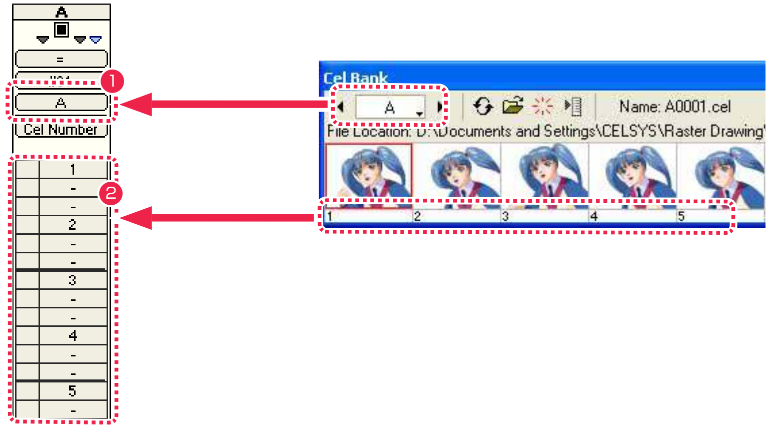
29 36

X: 2828 Y: 312

Step: 03 About the cel bank

In this step, an overview is given of the cel bank.

In CoreRETAS HD, the images to be used as the materials are loaded into the [Cel Bank] of each layer before shooting is carried out. When the same images are to be jointly used in more than one layer, it is convenient to share the [Cel Bank].



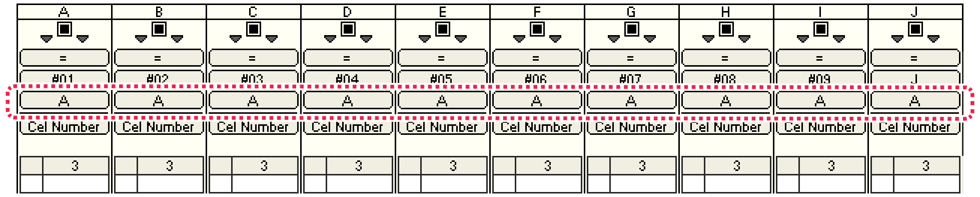
Name: A0001.cel

File Location: D:\Documents and Settings\CELSYS\Raster Drawing

❶ In the shooting X-sheet, the [Select Cel Bank] menu is used to set which [Cel Bank] images are to be used in each layer.

❷ The [Cel Number] responds to the sequential numbers of the images loaded in the [Cel Bank].

In a situation where the same images are to be used in 10 kinds of layers from the [A] cel to the [J] cel, it would be troublesome to load the same images from the image folder to the [Cel Banks] 10 times. In this case it will be possible to jointly use the images simply by setting the same [Cel Bank] in the [Select Cel Bank] menu of each layer.

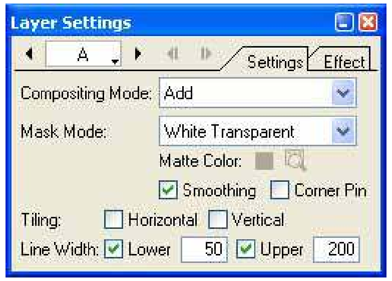


Ex.: Joint use of cel bank [A] by cels [A] to [J].

Step: 04 About the layer settings

In this step, an overview is given of the layer settings.

The [Layer Settings] palette allows setting of the [Compositing Mode] and [Mask Mode] for images loaded in the [Cel Bank].



Compositing Mode: Add

Mask Mode: White Transparent

Matte Color:

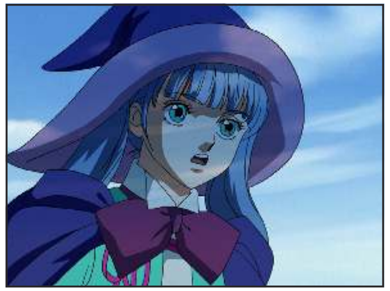
☑ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☑ Lower 50 ☑ Upper 200

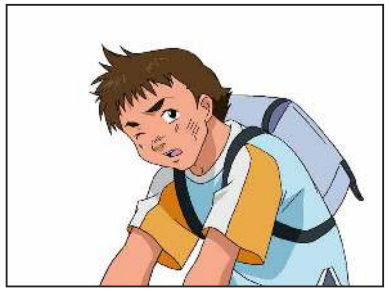
Compositing mode

Settings relating to the compositing mode of each layer are carried out.
Ex. Multiply Mode: Regarding the compositing effect of the lower layer, the pixels themselves are multiplied and the result divided by 255 (when 8 bits).

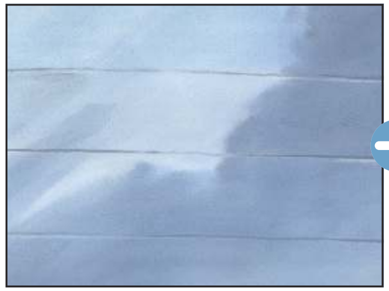


Mask mode

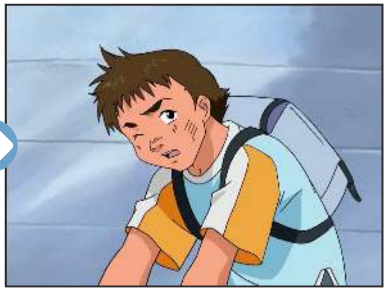
Allows setting of the parts of the images loaded in the layer that are to be made transparent.
Ex. White Transparent: Compositing by setting all the completely [White] pixels (RGB=255, 255, 255) in the image to be transparent.



[Mono Trace] Image (The color behind the figure is RGB=255, 255, 255)



Background



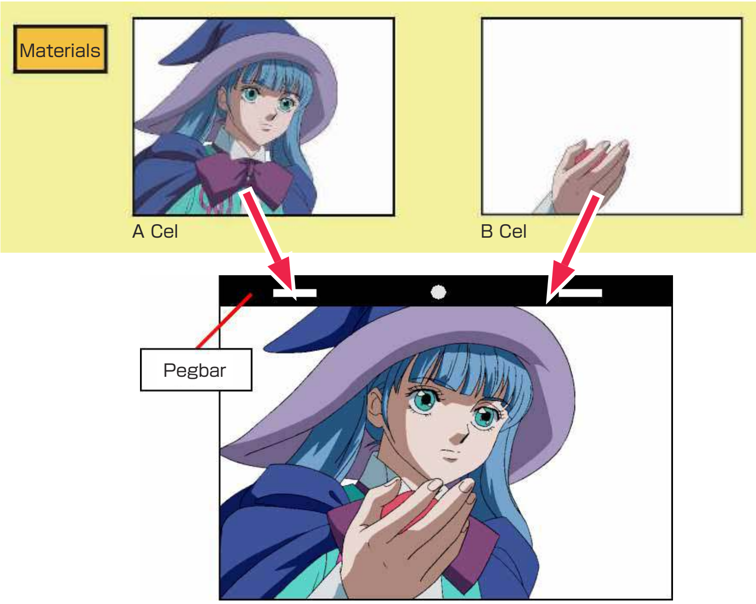
Shooting Result

Step: 05 About the pegbar

In this step, an overview is given of the pegbar.

The [Pegbar] is a convenient function when several layers are to be given the same movement.

* In order to explain the concept of the [Pegbar] in CoreRETAS HD, the figure below models the type of pegbar used in the animation production workplace. Note that the images will not actually be shown as in the figure below.



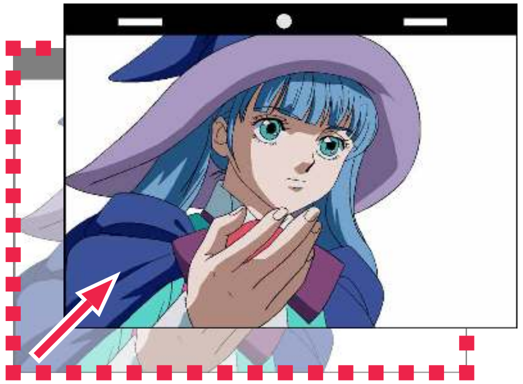
In the animation production process, the materials would generally be drawn as separate cels (layers), so that the cel showing the face would be the [A] cel and the cel showing the hand would be the [B] cel.
However, in this situation, if a sliding movement is applied to the [A] cel while the [B] cel is not moved, the positions of the [A] cel and [B] cel will become displaced.

In order that there will be no displacement, it will be necessary to apply exactly the same movement to the [A] cel and [B] cel. However, to apply the same sliding movement to the [B] cel that was applied to the [A] cel, it would be necessary to conduct 2 operations. Further, in the situation where the same movement should be applied to 10 types of layers for the [A] to [J] cels, for example, it would be necessary to conduct the same operation 10 times, which is not efficient.

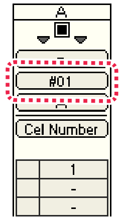
In CoreRETAS HD, when cels are to be moved, instead of moving the cels themselves, each [Cel] layer is first connected to a [Pegbar] and then this [Pegbar] is moved. This device allows the layers connected to the pegbar to be moved together as a group.

It may be easier to visualize this by imagining a clip that holds together a number of sheets of paper.

Simply by connecting each of the [Cel] layers to the same [Pegbar] from the [X-sheet] window, it is possible for several layers to jointly use the same parameters ([P Position X, Y, Z], [P Scale X, Y], [P Rotation X, Y, Z] and [P Center X, Y]) and be moved together as a group.



When the [A] cel and [B] cel are connected to the [#01] pegbar, both cels may be moved in the same way simply by moving the [#01] pegbar.



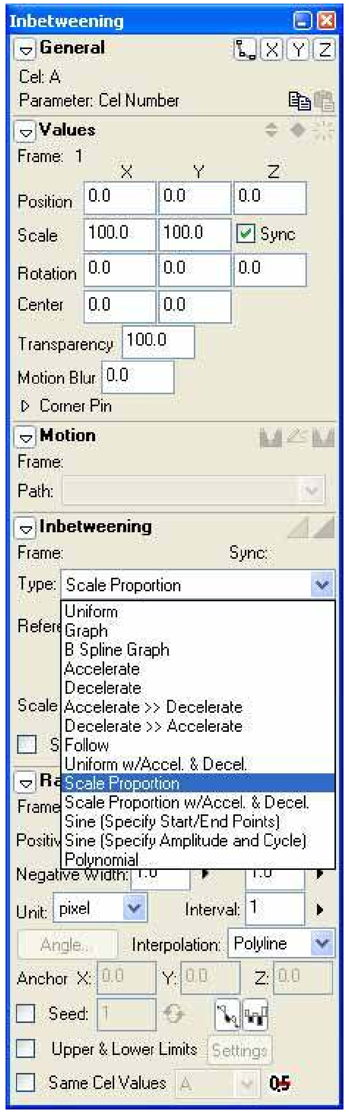
The [Pegbar] is set using the X-sheet [Select Pegbar] Menu.
When layers connected to the [Pegbar] are to be displaced or moved individually, offsets are applied for each layer.

Step: 06 About inbetweening and key frames

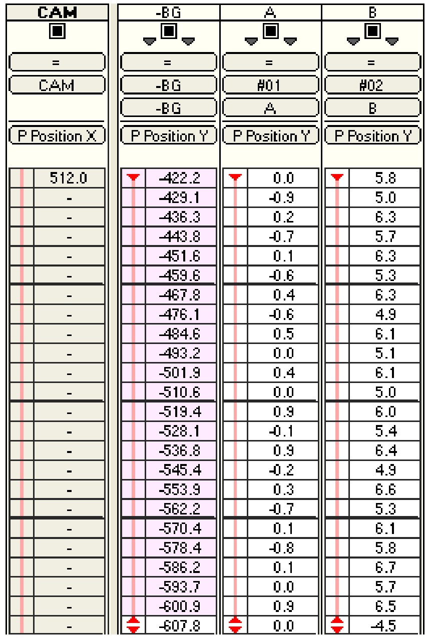
In this step, an overview is given of inbetweening and key frames.

Inbetweening

In inbetweening, it is possible to set movement starting and finishing frames (key frames) for [Cameras], [Pegbars], and [Layers], and to automatically generate the parameters of frames in between the key frames (inbetweening). Inbetweening can be carried out using a variety of settings including [Acceleration], [Deceleration], [Sine Curve], and [Polynomial].


Inbetweening
General
X
Y
Z
Values
X
Y
Z
Corner Pin
Motion
Inbetweening
Uniform
Graph
B Spline Graph
Accelerate
Decelerate
Accelerate >> Decelerate
Decelerate >> Accelerate
Follow
Uniform w/Accel. & Decel.
Scale Proportion
Scale Proportion w/Accel. & Decel.
Sine (Specify Start/End Points)
Sine (Specify Amplitude and Cycle)
Polynomial
Angle...
Settings
0.5

Cel: A
Parameter: Cel Number
Frame: 1
Position X 0.0 Y 0.0 Z 0.0
Scale X 100.0 Y 100.0 ☑ Sync
Rotation X 0.0 Y 0.0 Z 0.0
Center X 0.0 Y 0.0
Transparency 100.0
Motion Blur 0.0
Frame:
Path:
Frame:
Sync:
Type: Scale Proportion
Negative Width: 1.0 1.0
Unit: pixel
Interval: 1
Interpolation: Polyline
Anchor X: 0.0 Y: 0.0 Z: 0.0
☐ Seed: 1
☐ Upper & Lower Limits
☐ Same Cel Values A

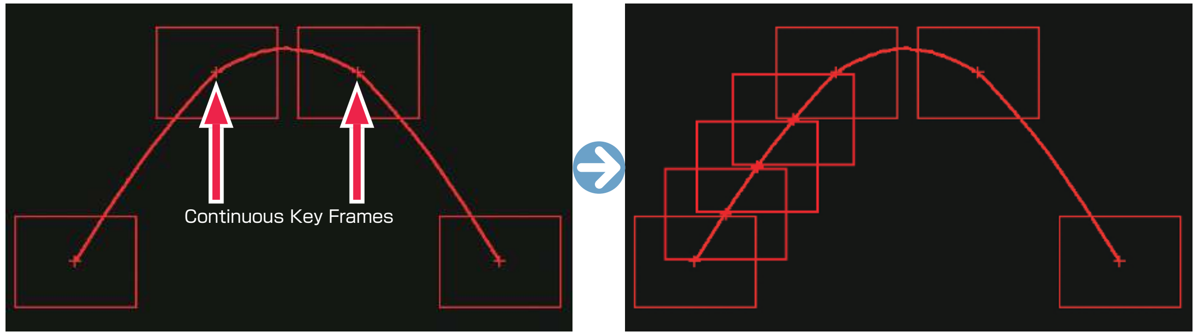


CAM	-BG	A	B
=	=	=	=
CAM	-BG	#01	#02
	-BG	A	B
P Position X	P Position Y	P Position Y	P Position Y
512.0	-422.2	0.0	5.8
-	-429.1	-0.9	5.0
-	-436.3	0.2	6.3
-	-443.8	-0.7	5.7
-	-451.6	0.1	6.3
-	-459.6	-0.6	5.3
-	-467.8	0.4	6.3
-	-476.1	-0.6	4.9
-	-484.6	0.5	6.1
-	-493.2	0.0	5.1
-	-501.9	0.4	6.1
-	-510.6	0.0	5.0
-	-519.4	0.9	6.0
-	-528.1	-0.1	5.4
-	-536.8	0.9	6.4
-	-545.4	-0.2	4.9
-	-553.9	0.3	6.6
-	-562.2	-0.7	5.3
-	-570.4	0.1	6.1
-	-578.4	-0.8	5.8
-	-586.2	0.1	6.7
-	-593.7	0.0	5.7
-	-600.9	0.9	6.5
-	-607.8	0.0	-4.5

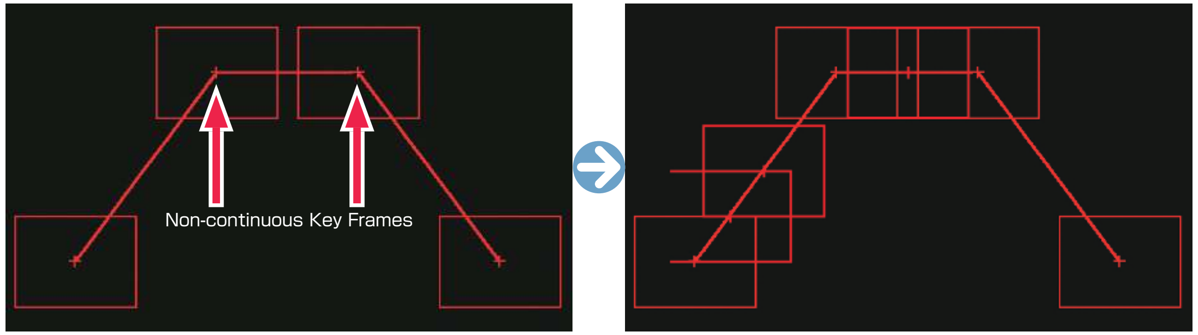
Key frames

There are two types of key frames, [Continuous Key Frames] and [Non-continuous Key Frames]. Through the appropriate use of [Continuous Key Frames] and [Non-continuous Key Frames], it is possible to carry out detailed inbetweening.

- [Continuous Key Frame] Inbetweening (Splined Section)
  By using the [Continuous Key Frame] when [Splined Section] is being used, the ratio of change between three or more key frames can be smoothly interpolated, and continuous inbetweening can be carried out.


Continuous Key Frames

- [Non-continuous Key Frame] Inbetweening
  When using [Non-continuous Key Frame], or [Continuous Key Frame] with a setting other than [Splined Section], inbetweening will be carried out as independent sections between each key frame.


Non-continuous Key Frames

Step:
07

Understanding the scene folder

In this step, an explanation is given about the scene folder, the image administering system of the RETAS!PRO HD Series.

About the scene folder

Since animation production consists of jointly conducted work handling a large number of image files, if each individual does not take care when naming files and folders, other people in the group will not know where the images are located or the content of the images, and it will not be possible to carry out work among a group of people.

For this reason, in the RETAS!PRO Series, in order that the many files can be effectively and systematically administered, a method has been adopted in which image files are administered in folder units.

This image administering method is called the [Scene Folder System].

By conducting image file administration based on the [Scene Folder System], data exchange between different productions can be carried out smoothly.

In the scene folder system, all the data necessary for the scene is stored in the folder known as the [Scene Folder].

Further, in the RETAS!PRO HD Series, it has been made possible to record the basic information relating to the scene, such as the [Title], [Sequence Number], and [Scene Number] in the scene folder. Other functions have also been added, such as a [Message Board] that allows entry of character information, and a convenient [Handwriting Memo] which enables conveying of information that is difficult to express using characters. This allows all the various items that were previously conveyed by writing on paper to be recorded as data in the scene folder.

Using this system, in the RETAS!PRO HD Series, having all the information in the scene folder means that it will not be necessary to write work directions on paper. Since simply sending the scene folder will allow all the work directions to be conveyed to other group members, it will be possible to realize a paperless working environment.

Two types of scene folders

There are two types of folder, the [Drawing Scene Folder] and the [Cel Scene Folder], according to the purpose.

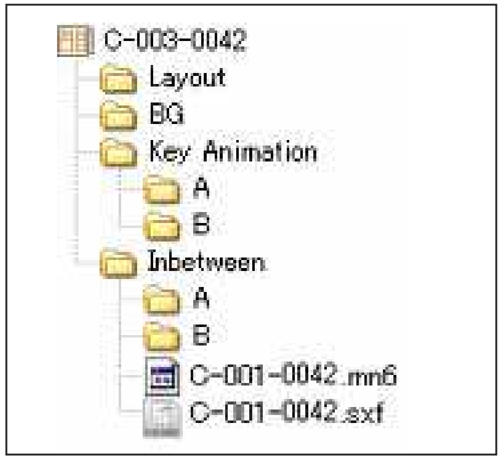
Drawing scene folder

This folder is made up of the following materials:

- [Layout] (Layout)
- [Keys] (Key Animation)
- [Inbetweens] (Inbetween)
- [Backgrounds] (BG)
- [Drawing X-sheet] (sxf)
- [Management File] (mn6)

and is used for:

- Drawing created using STYLOS HD



C-003-0042
Layout
BG
Key Animation
A
B
Inbetween
A
B
C-001-0042.mn6
C-001-0042.sxf

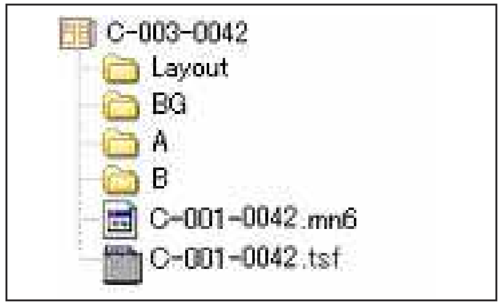
Cel scene folder

This folder is made up of the following materials:

- [Layout] (Layout)
- [Backgrounds] (BG)
- [Cels]
- [Shooting X-sheet] (tsf)
- [Management File] (mn6)

and is used for:

- Scans and tracing created using TraceMan HD
- Painting created using PaintMan HD
- Shooting created using CoreRETAS HD



C-003-0042
Layout
BG
A
B
C-001-0042.mn6
C-001-0042.tsf

POINT

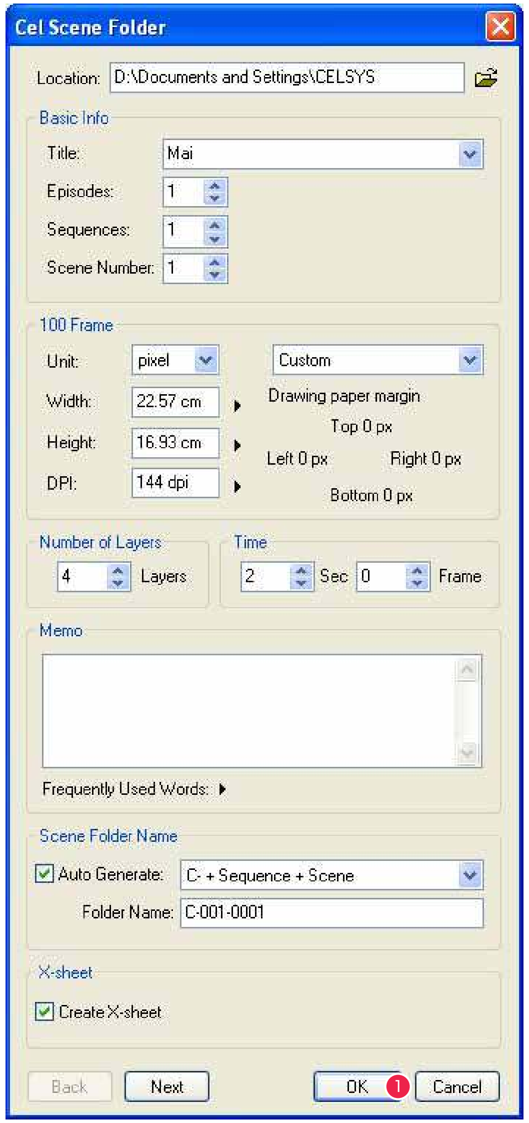
Exporting finished drawings

The [Drawing Scene Folder] after completion of drawing in STYLOS HD can be changed to a [Cel Scene Folder] through conducting finished drawing export by selecting [Export] -> [Finishing] from the [File] menu.

Creating new drawing scene folders and cel scene folders

Drawing scene folders (STYLOS HD only) and cel scene folders (programs except for STYLOS HD) can be created using the following procedure:

By selecting [New] -> [Scene Folder...] from the [File] menu, or selecting the [New Scene Folder...] button from the [File Browser], the basic setting menu of the [Drawing Scene Folder] dialog box or [Cel Scene Folder] dialog box will be displayed.



Cel Scene Folder

Location: D:\Documents and Settings\CELSYS

Basic Info
Title: Mai
Episodes: 1
Sequences: 1
Scene Number: 1

100 Frame
Unit: pixel
Custom
Width: 22.57 cm
Height: 16.93 cm
DPI: 144 dpi
Drawing paper margin
Top 0 px
Left 0 px
Right 0 px
Bottom 0 px

Number of Layers
4 Layers

Time
2 Sec 0 Frame

Memo

Frequently Used Words:

Scene Folder Name
☑ Auto Generate: C- + Sequence + Scene
Folder Name: C-001-0001

X-sheet
☑ Create X-sheet

① After conducting the settings and clicking the [OK] button, the scene folder will be created.

Method of viewing the [Scene Folder and Basic Settings] dialog box

[Location]
By clicking on button at the right side, the [Browse For Folder] dialog box will be shown and it will be possible to select the destination folder.

[Basic Info]
- [Title]
  Input the title.
- [Episode]
  Input the episode number.
- [Sequence]
  Input the sequence number.
- [Scene Number]
  Input the scene number.

[100Frame]
The [100Frame] units, width, and height can be selected from the list.

- [Unit]
  Input the [100Frame] [Standard Resolution] units.
- [Width]
  Input the [100Frame] [Standard Resolution] width.
- [Height]
  Input the [100Frame] [Standard Resolution] height.
- [DPI]
  Input the [100Frame] [Standard Resolution] DPI.

[Number of Layers]
Input the number of layers (cel layers) used in the scene folder.

[Time]
Input the length of the scene.

[Memo]
A memo can be input.

[Scene Folder Name]
- [Auto Generate]
  Automatically generate the scene folder name from the sequence number and scene number. Selection may be made from the following patterns:
  [C- + Sequence + Scene]
  [Sequence + Scene]
  [Episode + Sequence + Scene]
  [Title + Episode + Sequence + Scene]

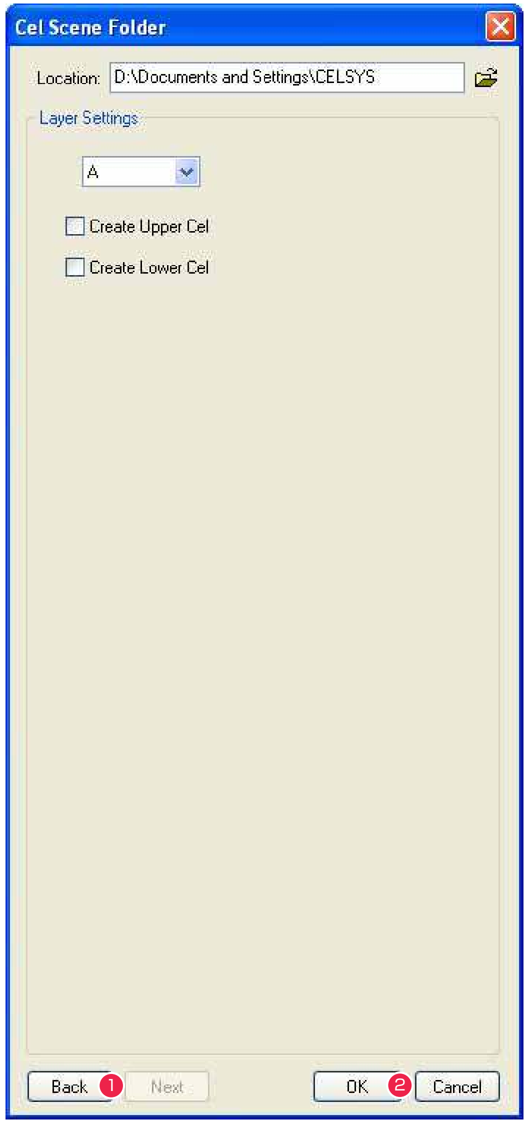
- [Folder Name]
  When the scene folder name is not automatically generated, manually input the folder name in the field.

- [Next] (Except for STYLOS HD)
  Move forward by one setting item of the dialog box, and switch the [Scene Folder Setting] dialog box to the [Scene Folder Setting and Layer Setting] dialog box. This is used when setting the [Upper Cel] and [Lower Cel].

Setting an upper cel and lower cel

The upper cel and lower cel are layers that are subordinate above or below each of the cel layers. In the situation where the upper cel or lower cel of the [A] cel has been created, all of the parameters on the X-sheet except for the [Cel Number] will be jointly used in the [A] cel.

When the [Next] button is clicked in the [Scene Folder and Basic Settings] dialog box of programs apart from STYLOS HD, the [Scene Folder and Layer Settings] dialog box will be displayed.


Cel Scene Folder

Location: D:\Documents and Settings\CELSYS

Layer Settings

A

☐ Create Upper Cel

☐ Create Lower Cel

① In the situation where the settings are made and then the [Back] button is clicked, the screen will return to the [Cel Scene Folder and Basic Settings] dialog box.

② In the situation where the settings are made and then the [OK] button is clicked, the scene folder will be created.

Method of viewing the [Scene Folder and Layer Settings] dialog box

[Location]
By clicking on the right side button, the [Browse For Folder] dialog box will be shown and it will be possible to select the destination folder.

Layer Setting Menu
Select the cel layer created by the upper cel and lower cel.

- [Create Upper Cel]
  For the selected layer, create an [Upper Cel] sub-cel folder.

- [Create Lower Cel]
  For the selected layer, create a [Lower Cel] sub-cel folder.

- [Back] button
  Return to the previous dialog box setting item.

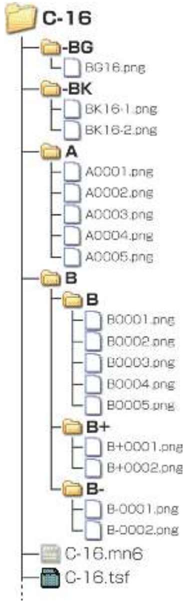
- [Next] button
  Proceed to the next dialog box setting item.

- [OK] button
  Following the dialog box settings, create a new scene folder.

- [Cancel] button
  Abort the creation of the new scene folder.

Scene folder structural elements

Scene folders include the following types of structural elements:

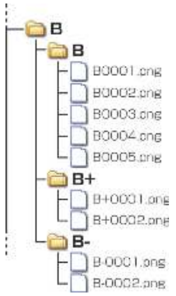


1. Cel folders for inbetweens

The BG (Background), A cel, B cel, and C cel images are stored in each of the folders.
In principle, the folder names should match the layer names.
Ensure that the A cel images are stored in the [A] folder and that the B cel images are stored in the [B] folder.
When reading in a [Scene Folder], if there are sub-folders that have the same names (-BG, A to Z) as the image layer folder names, CoreRETAS HD will recognize these folders as [Cel Folders].
CoreRETAS HD will load the [Cel Folder] into the cel bank, and will create a link to the cel layer of the same name.
Ordinarily, BG (Background) and other folders have a hyphen (-) or underbar (_) added to the front of the folder name, such as [-BG].

2. Sub-cel folders for combined cels

The sub-cel layer is an image layer subordinate to the cel layer and has two types, an upper cel and lower cel. The sub-cel layer is mainly used in [Combined Cel], and unless there is a special reason not to do so, the [Lower Cel] should be used for [Combined Cel]. When reading in the [Scene Folder], CoreRETAS HD searches for cel folders in the scene folder and automatically conducts [Loading to the Cel Bank] and [Mask Setting]. However, when there is a sub-folder in the [Cel Folder], it is loaded to the cel bank following the procedure below.



In the situation where there is a sub-folder with the same name as the cel folder (-BG, A to Z) one layer below the cel folder, this folder will be loaded into the cel bank and will be linked to the cel layer that has the same name.

In the situation where cel folders that have names with an [+] or [-] after the [(Image Layer) Folder Name] are present one layer below the cel folder, each folder will be loaded into the cel bank, and will be loaded as the [Upper Cel] and [Lower Cel] of the [Image Layer].

For other image files and folders apart from the above, CoreRETAS HD will not carry out automatic reading and loading.

3. Image files for keys, inbetweening, and backgrounds

The images that are used in a layer are stored inside the cel folders.In principle, the following type of naming method is used in the scene file system:

Layer name + Sequential number (from 4 digits) + Extension

In principle, the [Layer Name] part uses one alphabetical character (single byte English character) corresponding to the A cel, B cel, etc.

For the [Sequential Number] part, the numbers must all have the same number of digits (4 digits or more, single-byte numerals).
Normally, the sequential numbering starts from [0001], and [0000] is not used.

Ex.: Image Layer Folder of the A Cel
A0001.png
A0002.png
A0003.png
A0004.png
·
·

Inappropriate examples:

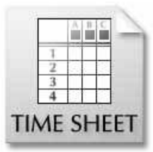
A0000.png	The number (sequential numbering) part is [0].
A1.png	The number of digits in the [Sequential Numbering] part are too few.
A0002	There is no extension.

For the parts of the file name apart from the [Extension], it is usually possible for the RETAS!PRO HD Series to handle file names even if they do not perfectly follow the determined naming system. However, it is recommended to follow the above rules to prevent mistakes from occurring.

4. X-sheet files sxf/tsf

These are X-sheet files created by RETAS!PRO, which have the following two types:

- Drawing X-sheet (Extension: *.sxf)
- Shooting X-sheet (Extension: *.tsf)



Drawing
X-sheet File Icon

Shooting
X-sheet File Icon

POINT

Folders that will not be used for batch processing

Folders that have a hyphen (-) or underbar (_) in front of their names, such as [-BG] or [-LO], and folders that include [BG] in the folder name, will be excluded from batch processing by RETAS!PRO.

5. Management file mn6

This is a file that has a variety of data required for working with the RETAS!PRO HD applications.

・Management File (Extension *.mn6)

RETAS!PRO HD will only recognize a folder as being a scene folder and automatically conduct various processing and settings when there is a management file contained in the folder.
The management file is simultaneously created when RETAS!PRO HD creates a [New Scene Folder], and cannot be optionally created by users through any other means.
Each RETAS!PRO HD application will automatically implement various settings based on the management file information.
Further, each RETAS!PRO HD application software will change the contents of the file as required.
Accordingly, it is forbidden for users to directly move, delete or change the [Management File].
If users directly move, delete or change the [Management File], although the data of the X-sheet that has previously been created will not be destroyed, it may be necessary to carry out the various settings manually.

Management
File Icon

POINT

Ver.5 mng file

In scene folders created using RETAS!PRO Ver.5, the included management file will have the [mng] extension.

Scene folder application rules

Regarding the application of scene folders, a number of basic rules should be followed. Take care of the following points:

1. When moving, copying and deleting files, be sure to carry out the operation in folder units

Images handled by RETAS!PRO are dealt with in folder units. If image files are moved after they have been read in to the scene folder, it will cause unexpected problems such as loss of consistency with the X-sheet.
Further, even if there is only one file, be sure to create the exclusive folder and save the file inside the folder.

2. Do not save unnecessary files inside the folder

For the same reason as the above, if unnecessary files are saved in the same folder as the cel files, shifting of file names will occur when the cels are loaded into the file previewer or cel banks (See [Handling of Cel Numbers in RETAS!PRO]). Part-way files created during the work process should be saved using a dedicated folder created in the scene folder.

3. Folders that are not to be included in batch processing

For folders containing backgrounds or part-way materials that are not to be included in sub-folder batch processing using TraceMan, if a [-] hyphen or [_] underbar is added in front of the folder name, such as [-BG] or [_temp], the folders will be excluded from the batch processing subjects.

4. Do not link to images located outside the scene folder

If image files located outside the scene folder are loaded into the cel bank, when the scene folder is moved, the links with the X-sheet will be lost. Ensure that all the image files used are saved inside the scene folder.

5. Do not link to images located in directories higher than the X-sheet

When carrying out nesting, even when the X-sheet and all of the image materials are saved in the scene folder, if images from a directory higher than the X-sheet are loaded into the cel bank, there is a possibility that the X-sheet links will be lost when the X-sheet is moved.

Basic format of scene folder names

The basic format of recommended scene folder names is as follows:
Ex.: Scene number 12 C-012

When the scene is made up of a number of sequences, these should be described by dividing with a hyphen [-].
Ex.: Scene number 20 of sequence 07 C-07-20

For the naming of a scene folder that has several jointly used scene numbers, these should be described through dividing the scene numbers with commas [,] (single byte).
Ex.: Joint use of scenes 17, 19, 22 C-017,019,022

Image files that have had their frame specifications scanned for camera work should be stored in a folder named -FRAME (or FRAME).
Ex.: -FRAME

Step: 08 Understanding the file browser

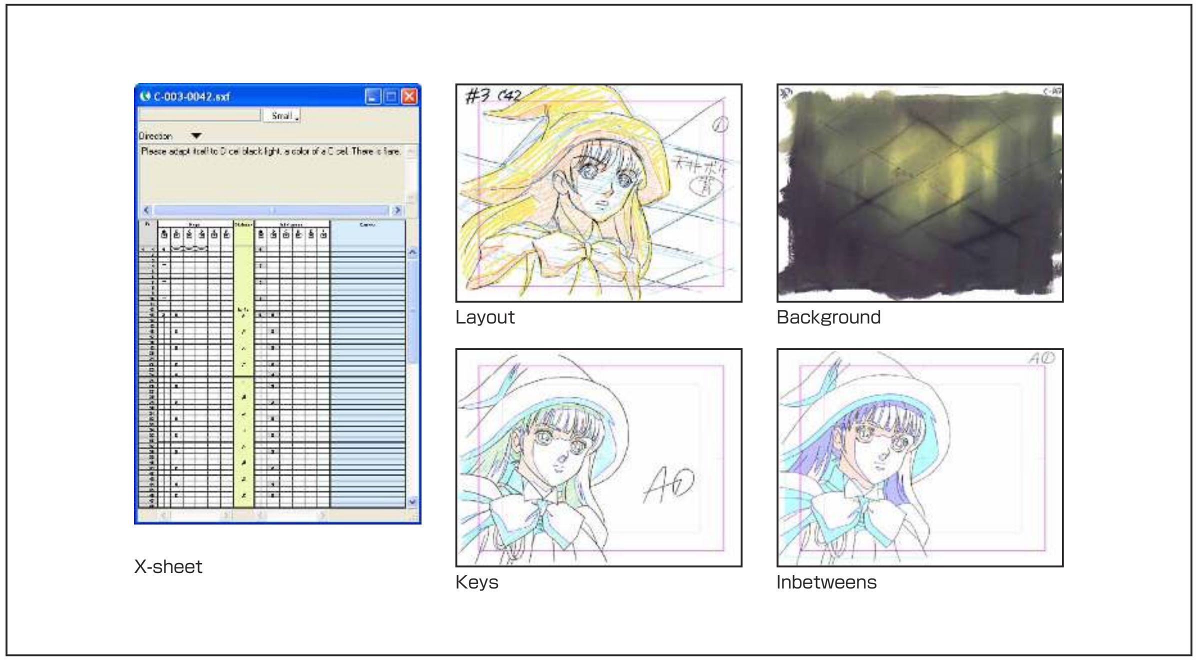
In this step, an explanation is given about the RETAS!PRO HD image administration function, the file browser.

About the file browser

The [File Browser] carries out browsing of the materials included in the scene folder, and allows unified administration of processing target files and folders.

In addition, through use of the [File Browser], the various work history and work-related directions and messages that were formerly written directly on the paper scene bag or stuck on as a memo can be written into and browsed in the scene folder.

Since all of the work-related directions can be conveyed to other persons simply by sending the scene folder, it is possible to realize a completely paperless working environment.



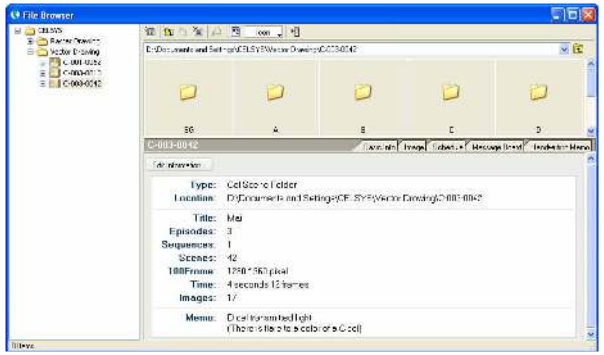
X-sheet

Layout

Background

Keys

Inbetweens



D:\Documents and Settings\CELSYS\Vector Drawing\C-003-0042

Type: Cel Scene Folder
Location: D:\Documents and Settings\CELSYS\Vector Drawing\C-003-0042
Title: Mei
Episodes: 3
Sequences: 1
Scenes: 42
100Frame: 1280 * 960 pixel
Time: 4 seconds 12 frames
Images: 17
Memo: D cel transmitted light
(There is flare to a color of a C cell)

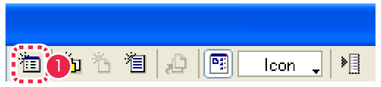
File Browser

Loading folders that are to be the subject of browsing

To allow searching and administration of scene folders, it will first be necessary to load the folders that will become the subjects of browsing.

1. Clicking the edit button of the browser folder

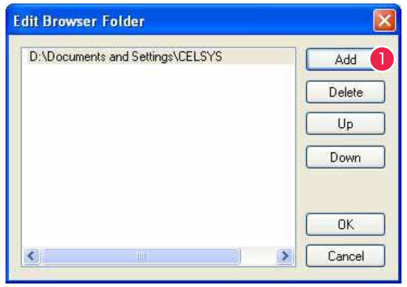
Click the [Edit Browser Folder...] button of the [File Browser].



1 Click the [Edit Browser Folder...] button.

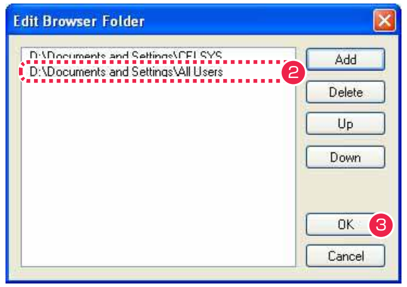
2. Add the target folder

When the [Edit Browser Folder] dialog box is shown, click the [Add] button.



D:\Documents and Settings\CELSYS

1 Click the [Add] button. When the [Edit Browser Folder] dialog box is shown, select the folder that is to be added to the [Edit Browser Folder] dialog box.



D:\Documents and Settings\CELSYS
D:\Documents and Settings\All Users

2 The selected folder will be added to the dialog box.

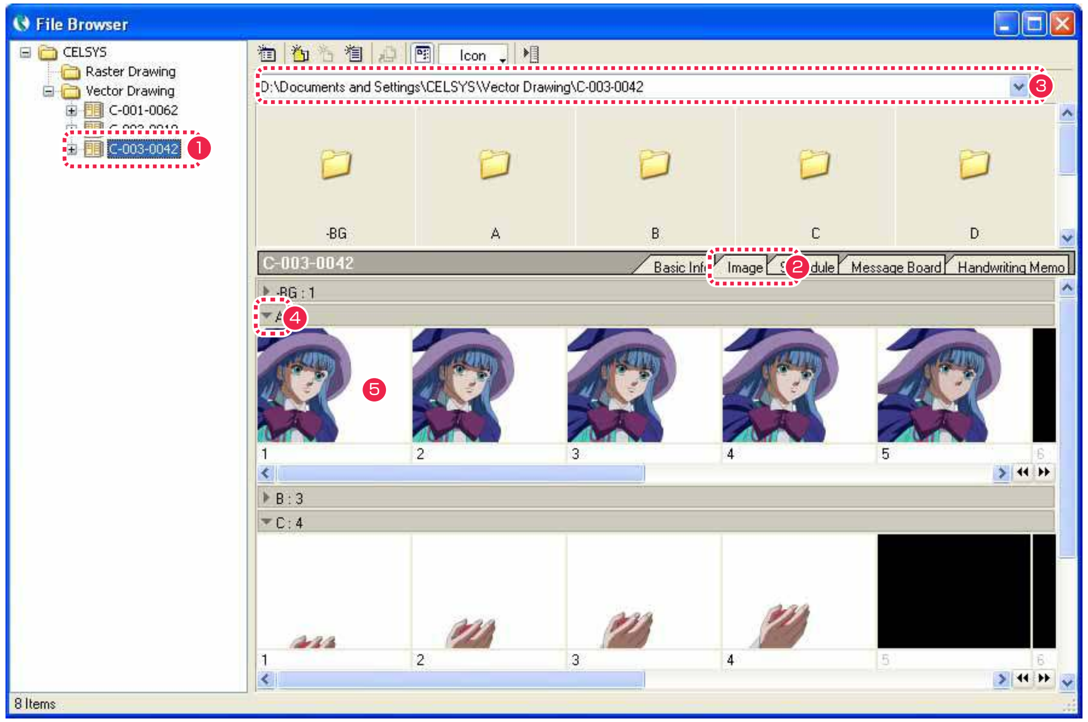
3 By clicking the [OK] button, the setting will be completed.

Method of reading the edit browser folder dialog box

- [Add] button
  Clicking this button displays the [Edit Browser Folder] dialog box.
- [Delete] button
  For folders in the list at left which have been selected by clicking (highlighted in blue), clicking the [Delete] button will delete the folder.
- [Up]/[Down] button
  For folders in the list at left which have been selected by clicking (highlighted in blue), clicking the [Up] and [Down] buttons will change the folder listing order.

Browsing the images

Selecting a created scene folder and switching to the Open [Image] tab will show a list of the images.


File Browser
CELSYS
Raster Drawing
Vector Drawing
C-001-0062
C-003-0042
Icon
-BG
A
B
C
D
C-003-0042
Basic Info
Image
Schedule
Message Board
Handwriting Memo
-BG : 1
A
B : 3
C : 4
8 Items
①
②
③
④
⑤

D:\Documents and Settings\CELSYS\Vector Drawing\C-003-0042

① Select the scene folder.

② Select the [Image] tab.

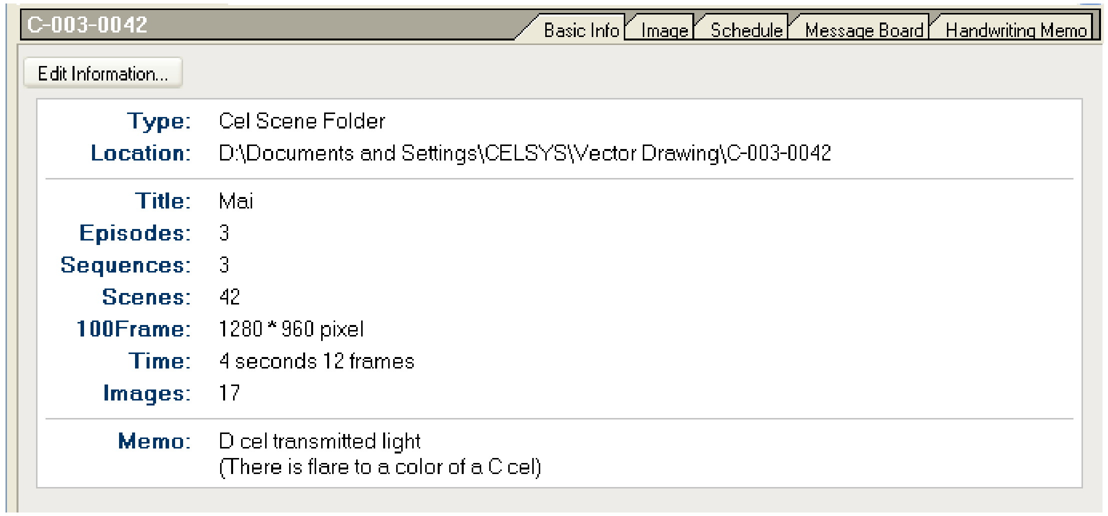
③ The address of the storage location will be displayed.

④ By clicking on this button, it will be possible to select whether to show or hide each cel.

⑤ By double-clicking on the thumbnail of an image that has already been loaded, the image will be opened.

Browsing the basic information

By selecting the [Basic Info] tab in the [File Browser] information view, the scene basic information will be shown, which was formerly written on the front face of the paper scene folder.

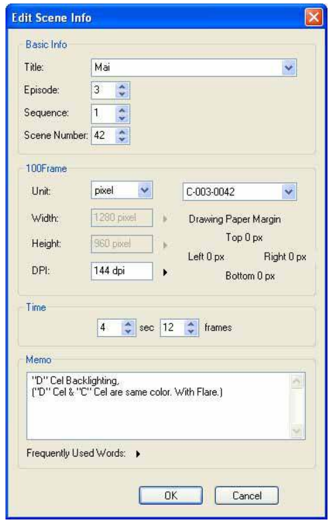

C-003-0042
Basic Info
Image
Schedule
Message Board
Handwriting Memo
Edit Information...

Type: Cel Scene Folder
Location: D:\Documents and Settings\CELSYS\Vector Drawing\C-003-0042

Title: Mai
Episodes: 3
Sequences: 3
Scenes: 42
100Frame: 1280 * 960 pixel
Time: 4 seconds 12 frames
Images: 17

Memo: D cel transmitted light
(There is flare to a color of a C cel)

- [Edit Infomation...] button
  This displays the [Edit Scene Info] dialog box, where editing of the [Title], [Episode], [Sequence], [Scene], [Time], and [Memo] can be carried out.

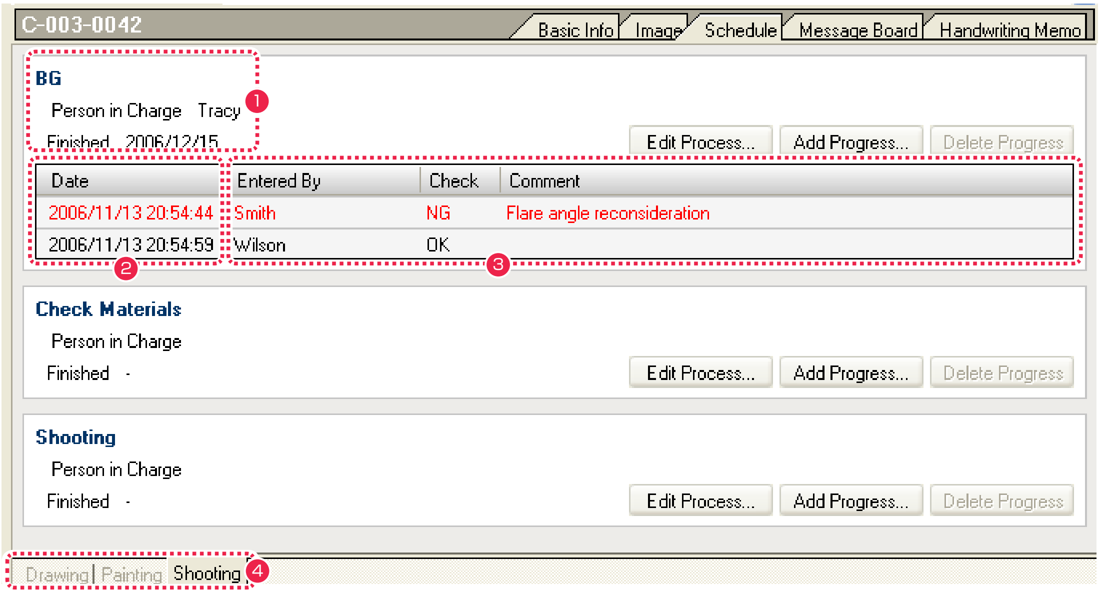

Edit Scene Info
Basic Info
100Frame
Time
Memo
OK
Cancel

Title: Mai
Episode: 3
Sequence: 1
Scene Number: 42
Unit: pixel
C-003-0042
Width: 1280 pixel
Height: 960 pixel
DPI: 144 dpi
Drawing Paper Margin
Top 0 px
Left 0 px
Right 0 px
Bottom 0 px
4 sec 12 frames
"D" Cel Backlighting,
("D" Cel & "C" Cel are same color. With Flare.)
Frequently Used Words:

- [Type]
  Shows the folder type.
- [Location]
  Shows the saved location of the scene folder.
- [Title]
  Shows the title.
- [Episodes]
  Shows the episode.
- [Sequences]
  Shows the sequence number.
- [Scenes]
  Shows the scene number.
- [100Frame]
  Shows the 100Frame size.
- [Time]
  Shows the length of the scene in number of seconds and number of frames.
- [Images]
  Shows the total number of keys and inbetweens.
- [Memo]
  Shows the memos that were written in when producing the scene folder.

Browsing the schedule

By selecting the [Schedule] tab in the [File Browser] information view, information can be written in about the progress condition, such as the person in charge of the work schedule and the date finished, etc.



BG
Person in Charge Tracy
Finished 2006/12/15

Date	Entered By	Check	Comment
2006/11/13 20:54:44	Smith	NG	Flare angle reconsideration
2006/11/13 20:54:59	Wilson	OK	

Check Materials
Person in Charge
Finished -

Shooting
Person in Charge
Finished -

① Schedule Information
Shows the person in charge of each process and the date finished.

② Progress Input Day
Shows the date and time when the progress confirmation and comments were written.

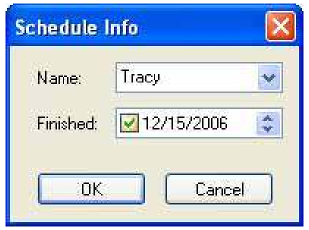
③ Progress Information
Shows the progress condition confirmation, comments, and name of the person writing the comments.

④ Process Tab
By changing between the tabs, it will be possible to write and confirm each kind of information.

- [Drawing] Tab
  Shows the layout, keys, and inbetweening schedule.
- [Finishing] Tab
  Shows the color styling, coloring, and special effect schedule.
- [Shooting] Tab
  hows the background, check materials, and shooting schedule.

- [Edit Process...] Button
  Clicking this button shows the [Schedule Info] dialog box, allowing input of the person in charge and the date finished.
- [Add Progress...] Button
  Clicking this button shows the [Progress Status] dialog box, allowing input of the name of the person making the input, and the confirmation and comments.
- [Delete Progress...] Button
  Clicking on unnecessary progress information in the progress situation column shown in the schedule and clicking the [Delete Progress] button allows the selected information to be deleted.

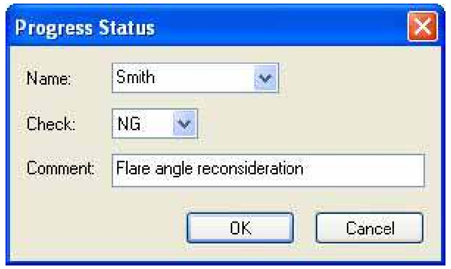
Schedule Info dialog box



Name: Tracy
Finished: ☑ 12/15/2006

- [Name(Person in Charge)]
  By clicking the button on the right side of the box, the names of people that have been previously written in will be listed to allow them to be selected.
  Names of people that have been entered in [Name(Entered By)] in the [Progress Status] dialog box will also be shown.
- [Finished(Date Finished)]
  By entering a check mark in the check box, it will be possible to input the date.
  When changing the date, click on the figures that you wish to change to allow input.

Progress Status dialog box

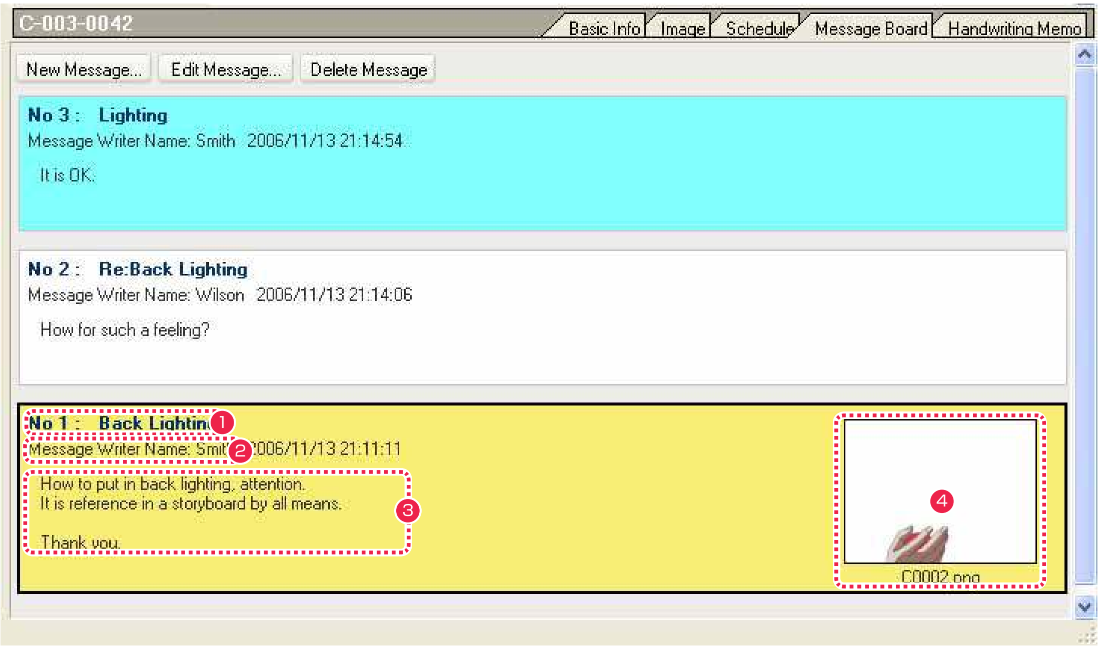


Name: Smith
Check: NG
Comment: Flare angle reconsideration

- [Name(Entered By)]
  By clicking the button on the right side of the box, the names of people that have been previously written in will be listed to allow them to be selected.
  Names of people entered in [Name(Entered By)] in the [Schedule Info] dialog box will also be shown.
- [Check]
  It will be possible to select [-], [OK], or [NG] from the list.
  When [NG] is selected, the characters in this progress information will be shown in red.
- [Comment]
  It will be possible to input contact information, etc. as text.

Browsing the message board

By selecting the [Message Board] tab in the [File Browser] information viewer, it will be possible to write messages about the schedule in text format.



No 3 : Lighting
Message Writer Name: Smith 2006/11/13 21:14:54
It is OK.

No 2 : Re:Back Lighting
Message Writer Name: Wilson 2006/11/13 21:14:06
How for such a feeling?

No 1 : Back Lighting
Message Writer Name: Smith 2006/11/13 21:11:11
How to put in back lighting, attention.
It is reference in a storyboard by all means.

Thank you.

① Title
The message number and subject are shown.

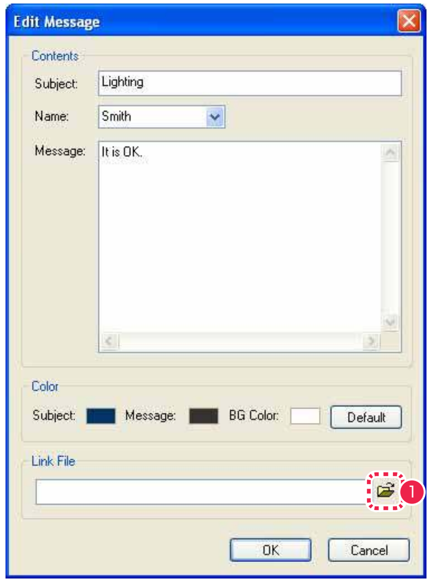
② Message Writer Name
The name of the person writing the message and the input date are shown.

③ Text
The message text is shown.

④ Link File
Links to the image file. Clicking on the thumbnail image will open the image file.

- [New Message...] Button
  Clicking this button shows the [Edit Message] dialog box, and it will be possible to write a new message.
- [Edit Message...] Button
  Clicking to select the message you wish to edit, then clicking the [Edit Message] button will show the [Edit Message] dialog box and allow rewriting of the message contents.
- [Delete Message] Button
  Clicking to select the message you wish to delete, then clicking the [Delete Message] button will show a confirmation dialog box, and clicking the [OK] button will delete the selected message.

Edit Message dialog box



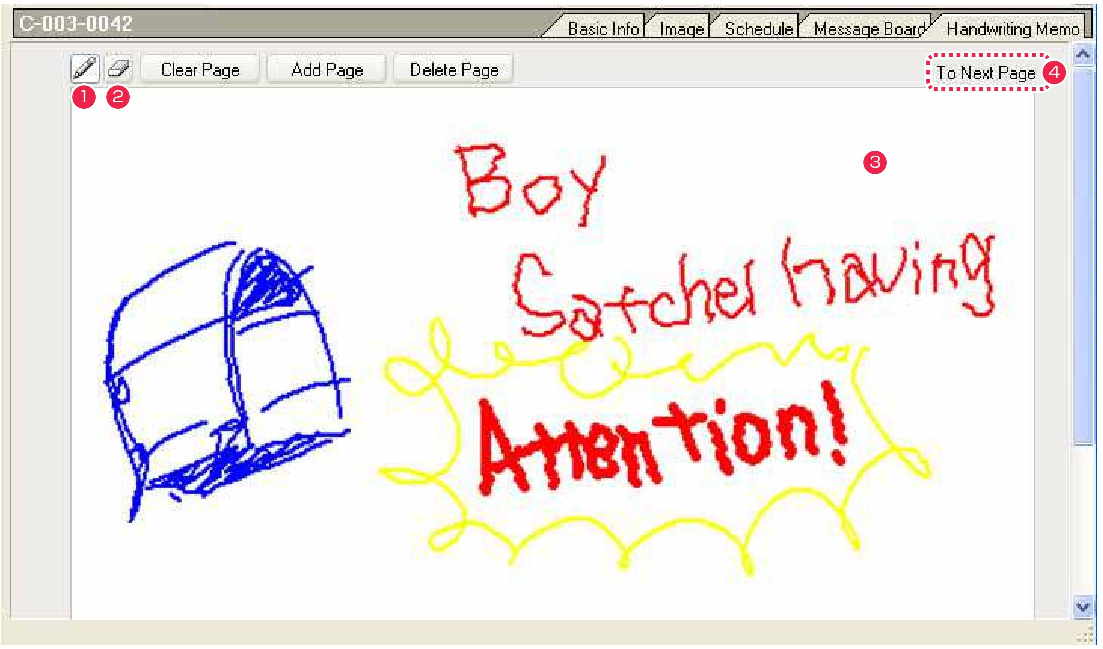
Subject: Lighting
Name: Smith
Message: It is OK.

- [Contents]
  Allows writing of the [Subject], [Name(Message Writer Name)] and [Message]. If any one of these contents is left blank, the message will not be accepted.
  The [Name] list also accesses the [Person in Charge] and [Entered By] lists of the [Schedule].
- [Color]
  By clicking the color buttons of the [Subject], [Message], and [BG Color], the color palette will be displayed and it will be possible to select the color. Clicking the [Default] button will return the colors to the default settings.
- [Link File]
  The address of the image selected by the [Open] button will be shown.

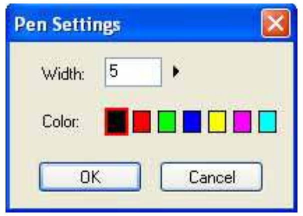
① [Open] Button
Allows selection of the image to be incorporated in the message.

Browsing the handwriting memos

It is possible to use a pen tablet to write handwriting memos (Characters or simple diagrams).

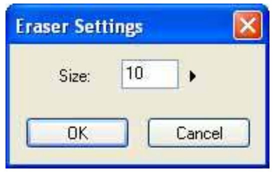

C-003-0042
Basic Info
Image
Schedule
Message Board
Handwriting Memo
Clear Page
Add Page
Delete Page
To Next Page
①
②
③
④
Boy
Satchel having
Attention!

❶ [Pen] Tool
This allows drawing of lines.
By double-clicking on the [Pen] tool icon, the [Pen Settings] dialog box will be shown, and the pen thickness and line color can be selected.


Pen Settings
OK
Cancel

Width: 5
Color: ■ 🟥 🟩 🟦 🟨 🟪 ■

❷ [Eraser] tool
This allows the drawn lines to be deleted.
By double-clicking on the [Eraser] tool icon, the [Eraser Settings] dialog box will be shown, and the size of the eraser can be selected in the range between 1 and 20.


Eraser Settings
OK
Cancel

Size: 10

❸ Page
This allows writing and displaying the handwritten memo.

❹ Page Switching
Shows the next page, previous page and top page in relation to the currently displayed page.

- [Clear Page] Button
  Clears the drawing contents of the currently displayed page.
- [Add Page] Button
  Adds a new page.
- [Delete Page] Button
  Deletes the currently displayed page.

Step: 09 Understanding the shooting X-sheet

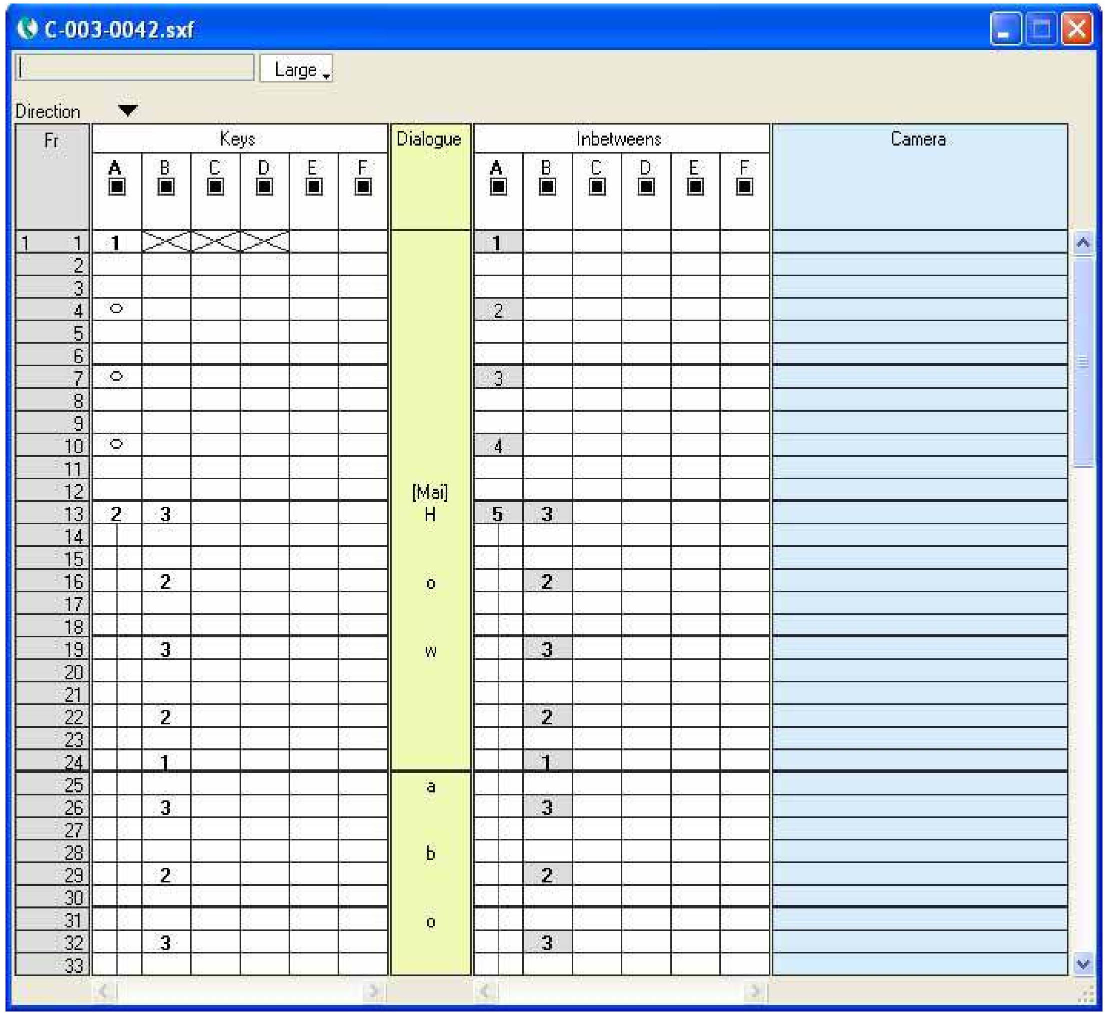
In this step, an explanation is given of the shooting X-sheet, which administers the camera timing and coordinates.

Two types of X-sheets

The X-sheet is the window used for operating the animation timing, cel layering and coordinate movement. In the RETAS!PRO X-sheets, there are [Drawing X-sheets] that are mainly used by STYLOS HD, and [Shooting X-sheets] used by CoreRETAS HD.

Drawing X-sheet (extension: sxf)

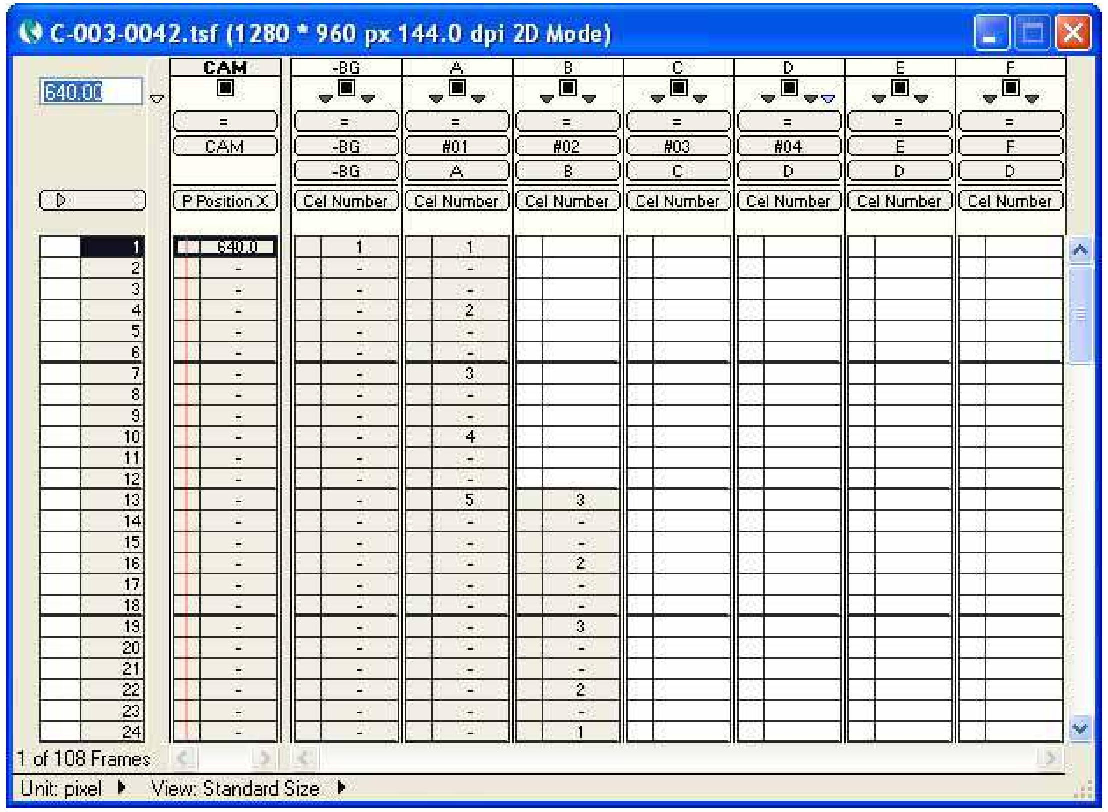
This X-sheet administers the [Animation Timing] and the [Cel Layering]. It is divided into the [Keys] and [Inbetween] columns, and allows input of the inbetweening marks and reverse X-sheet marks used in drawing. It is also possible to browse these X-sheets using TraceMan HD, PaintMan HD, and CoreRETAS HD.



Fr	Keys A	Keys B	Keys C	Keys D	Keys E	Keys F	Dialogue	Inbetweens A	Inbetweens B	Inbetweens C	Inbetweens D	Inbetweens E	Inbetweens F	Camera
1 1	1	×	×	×				1						
2														
3														
4	○							2						
5														
6														
7	○							3						
8														
9														
10	○							4						
11														
12							[Mai]							
13	2	3					H	5	3					
14														
15														
16		2					o		2					
17														
18														
19		3					w		3					
20														
21														
22		2							2					
23														
24		1							1					
25							a							
26		3							3					
27														
28							b							
29		2							2					
30														
31							o							
32		3							3					
33														

Shooting X-sheet (for CoreRETAS HD extension: tsf)

In addition to the [Animation Timing] and [Cel Layering], items such as the [image position coordinates] and [transparency] are administered. These X-sheets are used by CoreRETAS HD.



	CAM	-BG	A	B	C	D	E	F
	=	=	=	=	=	=	=	=
	CAM	-BG	#01	#02	#03	#04	E	F
		-BG	A	B	C	D	D	D
	P Position X	Cel Number	Cel Number	Cel Number	Cel Number	Cel Number	Cel Number	Cel Number
1	640.0	1	1					
2	-	-	-					
3	-	-	-					
4	-	-	2					
5	-	-	-					
6	-	-	-					
7	-	-	3					
8	-	-	-					
9	-	-	-					
10	-	-	4					
11	-	-	-					
12	-	-	-					
13	-	-	5	3				
14	-	-	-	-				
15	-	-	-	-				
16	-	-	-	2				
17	-	-	-	-				
18	-	-	-	-				
19	-	-	-	3				
20	-	-	-	-				
21	-	-	-	-				
22	-	-	-	2				
23	-	-	-	-				
24	-	-	-	1				

1 of 108 Frames

Unit: pixel View: Standard Size

About the shooting X-sheet

The shooting X-sheet differs from the drawing X-sheet, in that in addition to the cel numbers, each layer also has various parameters.

Frame (time axis)

Each of the lines stretching in the horizontal direction on the X-sheet are known as [Frames].

The frames must start from [1], and are named according to the numbering from the start, so that the 12th frame will be known as the [12th Frame], and the 60th frame from the start will be the [60th Frame]. In CoreRETAS HD, the maximum number of frames that may be used is 6000 frames.

Cel layer (cel layering)

The columns that are lined up vertically on the X-sheet are called [Layers], and show the image layers. From the background (-BG) layer, the layers to the right are layered above each other.

In CoreRETAS HD, it is possible to use up to a maximum of 100 layers, and as the default the layers will be shown as A to Z and AA to AF.

For a detailed description of layers, see the [Type of Layers] section in this step.

Camera layer

The camera layer is the layer for controlling the camera movement. This is a unique function of the shooting X-sheet.

Multi-Camera

In CoreRETAS HD, it is possible to create several cameras (camera layers).

For a more detailed description of the Multi-Camera, see [Multi-Camera] in Chapter 5 [Application Description: Special Effects and Camera Effects].

Pegbar selection menu

The [Pegbar] is used for [Grouping Layers]. This is a unique function of the shooting X-sheet.

Since layers that are connected to the same pegbar share the same parameters including position, scale, rotation and center, operating the pegbar parameters will apply the same movement to all the layers connected to the pegbar.

For more details regarding the camera parameters, refer to the [Types of Camera Parameters] section in this step.

Camera pegbar

The camera pegbar is the pegbar connected to the camera layer that is created when newly creating a shooting X-sheet.

The only difference from other pegbars is the name, and there is no difference in function. Accordingly, although it will be possible to reconnect the camera layer to other pegbars apart from the camera pegbar, it will easily cause confusion, and unless there is a particular reason the camera layer should be connected to the camera pegbar. In any case, the camera clipping domain (the range of the drawing window that will be finally incorporated) will be determined by the pegbar to which the camera layer is connected.

Parental pegbars

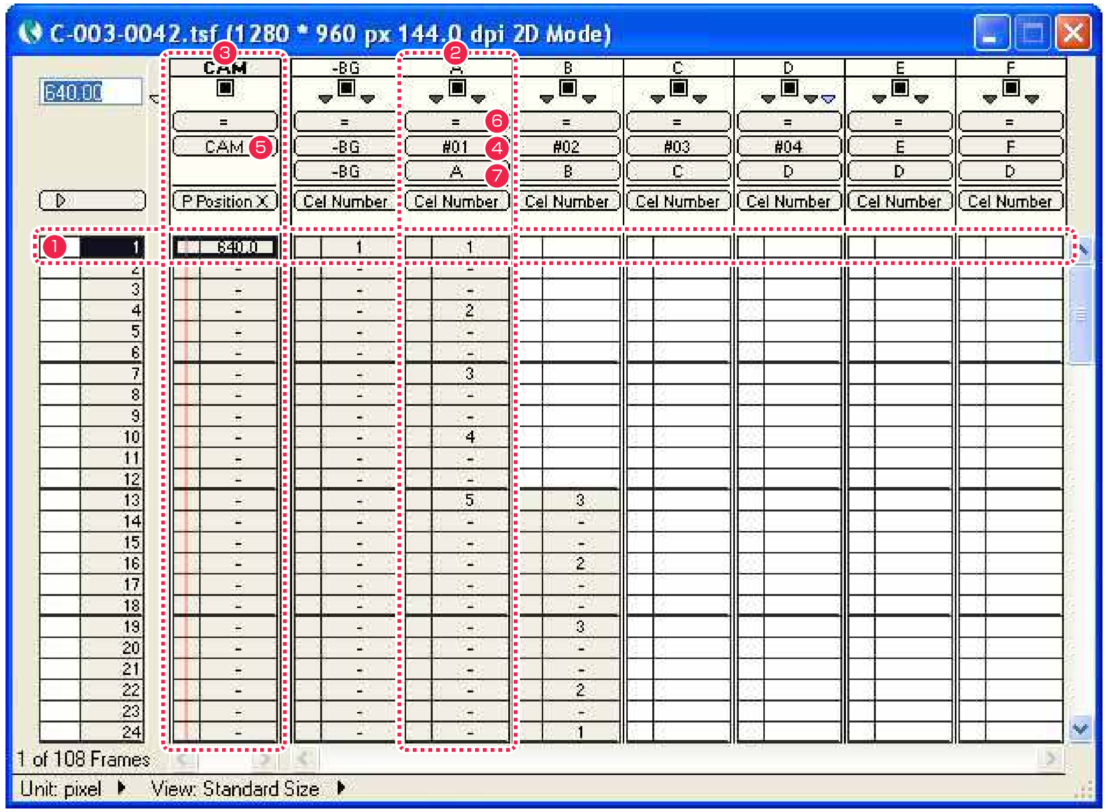
A parent-child relationship can be set to pegbars, and it will be possible to specify other pegbars as only one parent pegbar.

For a more detailed description of parent-child pegbars, see [Parental Pegbars] in Chapter 5 [Application Description: Special Effects and Camera Effects].

Cel bank selection menu

This menu selects the [Cel Bank] to which the image materials used by the layer have been loaded. Normally, a dedicated [Cel Bank] is selected to support each layer.

For a more detailed description of [Cel Banks], see [About Cel Banks] in Chapter 2 [Basic Description: Overview].



① Frame: Time axis

② Cel Layer: Cel layering

③ Camera (Camera layer)

④ Pegbar Selection Menu (Layer grouping/ Coordinate shifting)

⑤ Camera Pegbar

⑥ Parent Pegbar Selection Menu

⑦ Cel Bank Selection Menu (Link with image materials)

POINT

X-sheet scrolling

The X-sheet can be scrolled in the Windows version by pressing [Ctrl] while dragging, and in the Mac OS X version by pressing [Cmd] while dragging.

Types of camera parameters

The pegbar and layer cel numbers (cel layering), coordinate shifting (position and scale), and transparency can be selected and administered using the [Input Parameters Selection] Menu.

- [Cel Number]
  Number of the image loaded in the cel bank (numerical value).

- [P Position X]
  Pegbar X direction position coordinate.

- [P Position Y]
  Pegbar Y direction position coordinate.

- [P Position Z]
  Pegbar Z direction position coordinate.

- [P Scale X]
  Pegbar X direction enlarge/reduce rate.

- [P Scale Y]
  Pegbar Y direction enlarge/reduce rate.

- [P Rotation X]*1
  Pegbar X-axis rotation angle. A clockwise rotation is positive.

- [P Rotation Y]*1
  Pegbar Y-axis rotation angle. A clockwise rotation is positive.

- [P Rotation Z]
  Pegbar Z-axis rotation angle. A clockwise rotation is positive.

- [P Center X]
  Pegbar center X coordinate. This is the center of rotation and zooming in/zooming out.

- [P Center Y]
  Pegbar center Y coordinate. This is the center of rotation and zooming in/zooming out.

- [Position X]
  Offset value relating to the pegbar X coordinate (difference value from coordinate center).

- [Position Y]
  Offset value relating to the pegbar Y coordinate.

- [Position Z]
  Offset value relating to the pegbar Z coordinate.

- [Scale X]
  Offset value relating to the pegbar X direction enlarge/reduce rate.

- [Scale Y]
  Offset value relating to the pegbar Y direction enlarge/reduce rate.

- [Rotation X]*1
  Offset value relating to the pegbar X-axis rotation angle. A clockwise rotation is positive.

- [Rotation Y]*1
  Offset value relating to the pegbar Y-axis rotation angle. A clockwise rotation is positive.

- [Rotation Z]
  Offset value relating to the pegbar Z-axis rotation angle. A clockwise rotation is positive.

- [Center X]
  Offset value relating to the pegbar center X coordinate. This is the center of rotation and zooming in/zooming out.

- [Center Y]
  Offset value relating to the pegbar center Y coordinate. This is the center of rotation and zooming in/zooming out.

- [View Angle]*1
  This is the camera view angle (angular field of view).

- [Transparency]
  This is the transparency of the layer.

- [Motion Blur]
  This is the motion blur percentage.

- [Corner Pin]*2
  This is the coordinates of the layer corner pin distortion.

*1 This may only be used in 3D Mode X-sheets.
*2 This may only be used when [Corner Pin] in the [Layer Settings] palette is set to on.

Types of layers

The following types of layers are used in shooting X-sheets.

- [Cel Layer]
  Layer for loading inbetween(cels).

- [Sub-cel Layer]
  Layer subordinated to the cel layer.
  These are mainly used for loading combined cels.
  With regard to the [Cel Layer], the left side [Sub-cel Layer] is known as the [Lower Cel] and the right side is the [Upper Cel].

- [BG (Background) Layer]
  The [Background Layer] only has a difference in name; its functions are exactly the same as the cel layer.
  Normally, it is used with the Mask Mode set to [Completely Opaque].

- [Effect Layer]
  This layer is for adding special effects to the [Cel Layer] (Background Layer) and [Camera Layer].
  For a more detailed description of the effect layers, see Chapter 5 [Application Description: Special Effects and Camera Effects] of this manual.

- [Camera Layer (Camera)]
  This layer is for controlling the camera.

- [Sound Layer]
  This layer is for loading in sound.
  For a more detailed description of the [Sound Layer], see [Loading a Sound File] in this step.

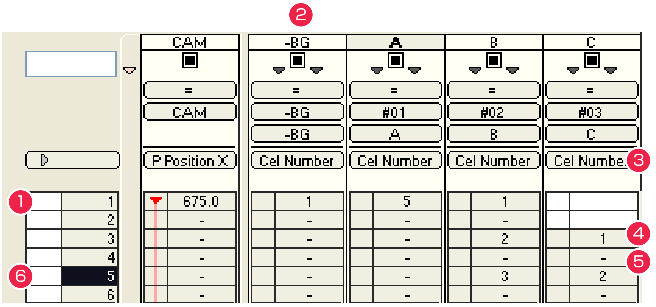
POINT

About [Camera Layers], [Effect Layers], and [Sub-cel Layers]

The [Camera Layers] do not have [Cel Numbers]. Further, the [Effect Layers] have different parameters supporting each function.
Since [Sub-cel Layers] cannot maintain parameters except for [Cel Numbers], it will not be possible to use the [Input Parameter Selection] Menu.

Method of reading the X-sheet

The X-sheet is a table showing the image layering order and the movement timing. Through using [Frames], [Layers], and [Cel Numbers], the X-sheet shows [At What Timing], [What Type of Layering], and [What Inbetweens] will be displayed.



	CAM	-BG	A	B	C
	=	=	=	=	=
	CAM	-BG	#01	#02	#03
		-BG	A	B	C
	P Position X	Cel Number	Cel Number	Cel Number	Cel Numbe
1	675.0	1	5	1	
2	-	-	-	-	
3	-	-	-	2	1
4	-	-	-	-	-
5	-	-	-	3	2
6	-	-	-	-	-

① The horizontal lines are the [Frames]. Moving downwards will move forward in time. The top frame is the [1st Frame], which is followed by the [2nd Frame], [3rd Frame], etc.

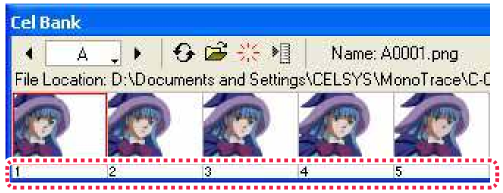
② The vertical columns are the [Layers]. These show the order in which the images are layered. From the [-BG] (Background) positioned as the lowest layer, the image layering order is higher the further right that the columns [A], [B], [C], etc. are located.
(In the situation where the Z value parameter has been changed, the layering order may not exactly match that shown on the X-sheet)

[CAM] is a special layer (the cameral layer) that reflects the camera range.
(In the situation where [Layer Processing] in the [Layer Settings] palette is set to [Layer (Z)] or [Pixel (Z)], the layering order may not exactly match that shown on the X-sheet)

③ These select the various parameters using the [Input Parameter Selection] Menu, and set the roles of the values input.

In the X-sheet shown in the figure above, each layer from [-BG] to [C] has its input subject set to [Cel Number].

④ The [Cel Numbers] assigned when loading to the [Cel Bank] are input in each [Data Cell], and specify the images used in the frame.
(The [Cel Number] may not always match the file name)



Name: A0001.png

File Location: D:\Documents and Settings\CELSYS\MonoTrace\C-C

[Cel Numbers]

⑤ The display of a hyphen [-] in the [Data Cell] indicates that the same number as the value shown immediately above has been loaded.

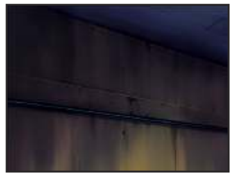
In the data cells shown in the figure below, the cel number [1] has been loaded to both the upper and lower cells.

	1
	-

⑥ The frame that has its [Frame Number Display] area shown inversed is called the [Current Frame], and will be the display and operation subject in the [Stage] window and [Rendering] window.

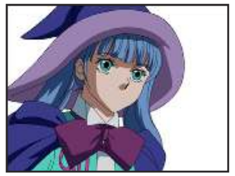
In the X-sheet shown on the previous page, the [5th Frame] is the [Current Frame].

The composited result of the [Current Frame] (5th Frame) will be the combination of four images, the cel number [1] image of the [-BG] layer, the cel number [5] image of the [A] cel layer, the cel number [3] image of the [B] cel layer, and the cel number [2] image of the [C] cel layer.



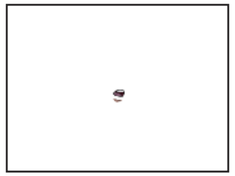
[-BG] (Background):
Cel Number [1]

+



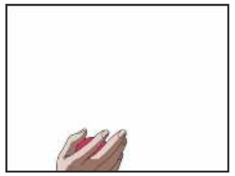
[A] Cel:
Cel Number [5]

+



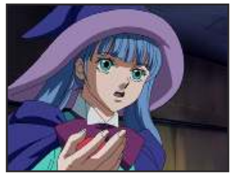
[B] Cel:
Cel Number [3]

+



[C] Cel:
Cel Number [2]

=

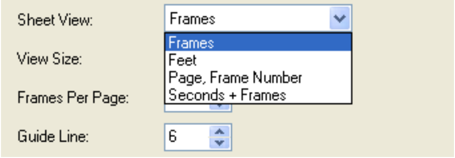


Composited result
of 5th Frame

POINT

Frame number display mode

Using the [X-sheet Settings] dialog box (Select [X-sheet Settings] -> [General...] in the [X-sheet] menu), it is possible to select from several display modes. The example shows the situation where the [Frame Numbers] mode has been selected.

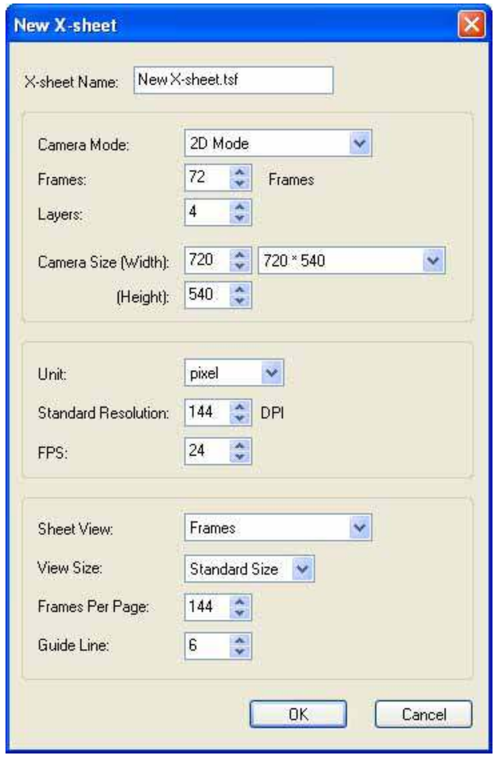


FPS setting

In the X-sheet, there are 24 frames per second (24FPS) and 30 frames per second (30FPS) settings. Generally, 24 frames per second X-sheets are used.
In the 24 frames per second (24FPS) X-sheet, the 24th Frame will correspond to 1 second and the 48th Frame will be 2 seconds.

Creating a new shooting X-sheet

Using CoreRETAS HD, it is possible to create a new shooting X-sheet.
By selecting [New] -> [X-sheet] from the [File] menu, the [New X-sheet] dialog box will be shown.


New X-sheet

X-sheet Name: New X-sheet.tsf

Camera Mode: 2D Mode
Frames: 72 Frames
Layers: 4
Camera Size (Width): 720 720 * 540
(Height): 540

Unit: pixel
Standard Resolution: 144 DPI
FPS: 24

Sheet View: Frames
View Size: Standard Size
Frames Per Page: 144
Guide Line: 6

- [X-sheet Name]
  Input the X-sheet name.

- [Camera Mode]
  Select 2D Mode or 3D Mode (See Chapter 4 [Application Description: Camera Work] in this manual).

- [Frames]
  Specify the X-sheet length (Overall playing time) using the view format selected in [X-sheet View].
  When the number of frames is increased, the increased portion of frames will be added to the end of the X-sheet.
  The parameters of the increased portion of frames will use the initial setting values at the time when the new X-sheet was created.
  In the situation where the number of frames is reduced, the reduced portion of frames will be deleted from the end of the X-sheet.

- [Layers]
  This sets the number of [Cel Layers] used in the X-sheet. The [Camera Layer] is not included in the number of layers specified.
  Accordingly, when [4] is input, the four layers will be [-BG], [A], [B], and [C], and the [Camera Layer] will be added.
  When the number of layers is increased, the increased portion of [Cel Layers] will be added to the right side of the sheet.
  The parameters of the increased layers will use the default setting values at the time when the new X-sheet was created.
  In the situation where the number of layers is reduced, the reduced portion of layers will be deleted from the right end of the sheet.

- [Camera Size (Width/ Height/ Pop-up Menu)]
  Sets the camera frame size. Representative camera sizes can be selected from the pull-down menu.

- [Unit]
  Allows selection of [pixels], [mm], or [inches] as the units used in CoreRETAS HD.

- [Standard Resolution]
  Sets the 100Frame resolution (Units: DPI)
  Based on the camera size and the standard resolution, CoreRETAS HD calculates how many mm (or inches) corresponds to 1 pixel.

- [FPS]
  Sets the FPS (number of frames in each 1 second).
  When exporting inbetween files, the correct speed for the movie export will be based on this setting.

- [X-sheet View]
  The mode for displaying the X-sheet is specified from the following:

Number of Frames:
Shows numbers in sequence from the first frame.

Feet:
Shows in feet.

Page, Frame Number:
Shows both number of pages and number of frames.

Seconds + Frames:
Shows a combination of seconds + number of frames.

- [View Size]
  Allows selection of the X-sheet view size as [Standard Size] or [Small Size].

- [Frames Per Page]
  Determines the number of frames in each 1 page of the X-sheet.

- [Guide Line]
  Inserts division lines at fixed intervals in order to make the X-sheet easier to read. Inputting [6] will show division lines every 6th frame.

POINT

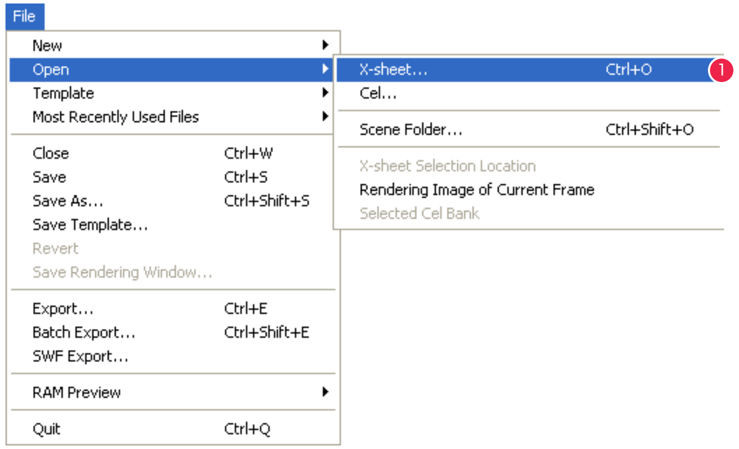
To change the X-sheet settings

When changing the shooting X-sheet settings after the X-sheet has been created, select [Sheet Settings] -> [General...] from the [X-sheet] menu. This shows the [X-sheet Settings] dialog box which has common items that allow resetting of values to be carried out.

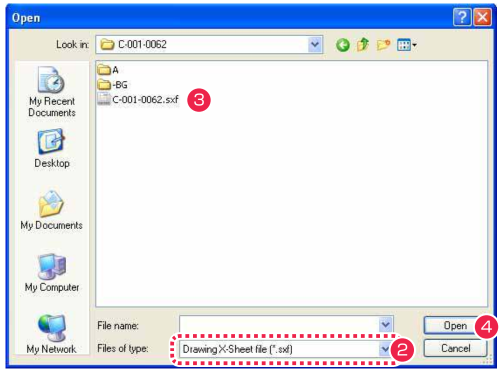
Converting a drawing X-sheet to a shooting X-sheet

In the situation where there is a [Drawing X-sheet File] (*.sxf), but no [Shooting X-sheet File] (*.tsf) (such as when a [Drawing X-sheet File] in STYLOS HD, TraceMan HD or PaintMan HD has not been exported as a [Shooting X-sheet File]), it will be necessary to convert the file to a [Shooting X-sheet File].

1. Opening the drawing X-sheet file


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Save Template...
Revert
Save Rendering Window...
Export... Ctrl+E
Batch Export... Ctrl+Shift+E
SWF Export...
RAM Preview
Quit Ctrl+Q
X-sheet... Ctrl+O
①
Cel...
Scene Folder... Ctrl+Shift+O
X-sheet Selection Location
Rendering Image of Current Frame
Selected Cel Bank

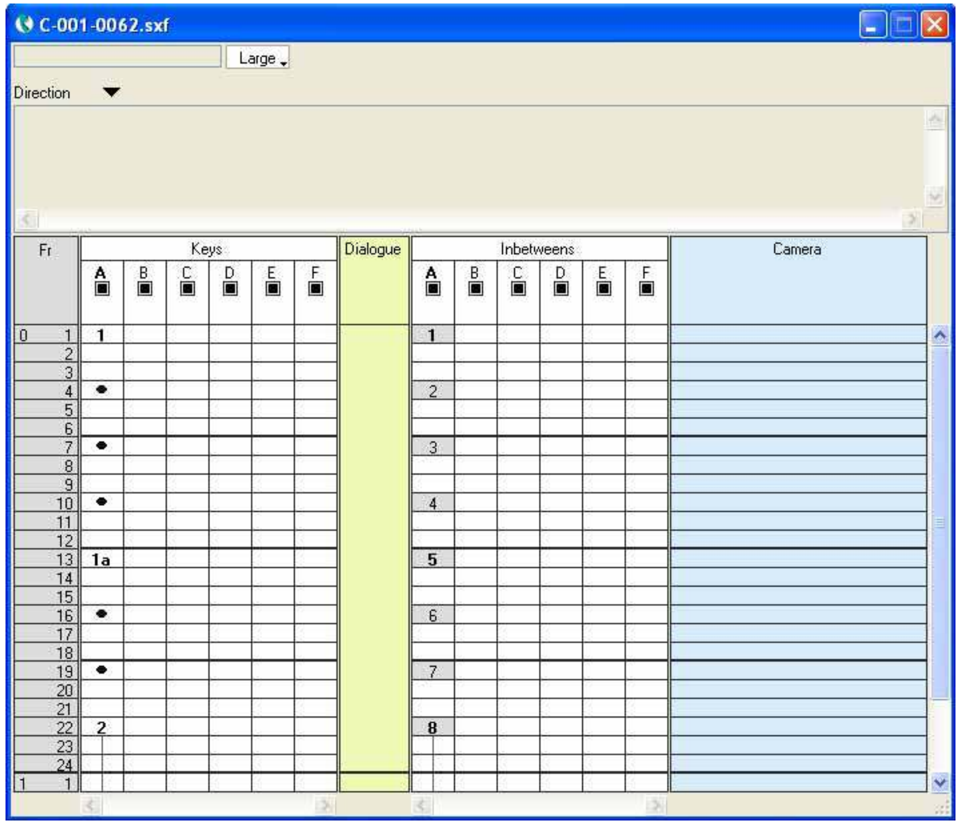
① Select [Open] -> [X-sheet...] from the [File] menu to show the [Open] dialog box.


Open
Look in: C-001-0062
A
-BG
C-001-0062.sxf
③
My Recent Documents
Desktop
My Documents
My Computer
My Network
File name:
Files of type: Drawing X-Sheet file (*.sxf)
②
Open
④
Cancel

② Select [Drawing X-sheet File (*.sxf)] as the [Files of type].

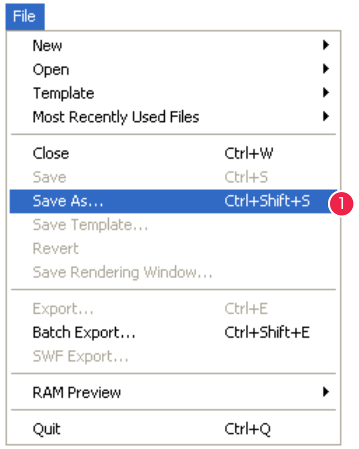
③ Select the previously saved [Drawing X-sheet File].

④ Click the [Open] button.

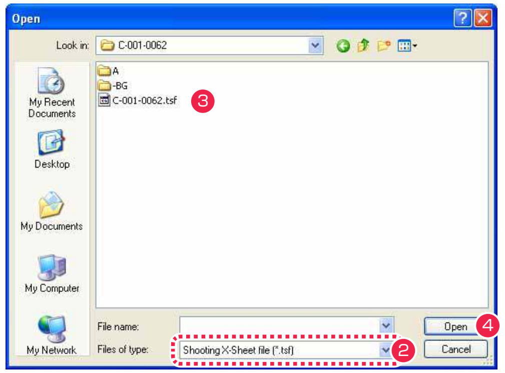

C-001-0062.sxf
Large
Direction
Fr
Keys
A B C D E F
Dialogue
Inbetweens
A B C D E F
Camera
1
1a
2
1
2
3
4
5
6
7
8

⑤ The drawing [X-sheet] window will be shown.

2. Saving as a shooting X-sheet file


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
Save As… Ctrl+Shift+S
①
Save Template…
Revert
Save Rendering Window…
Export… Ctrl+E
Batch Export… Ctrl+Shift+E
SWF Export…
RAM Preview
Quit Ctrl+Q

① Select [Save As...] from the [File] menu to show the [Save As] dialog box.


Open
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open
Cancel
②
③
④

Look in: C-001-0062

A
-BG
C-001-0062.tsf

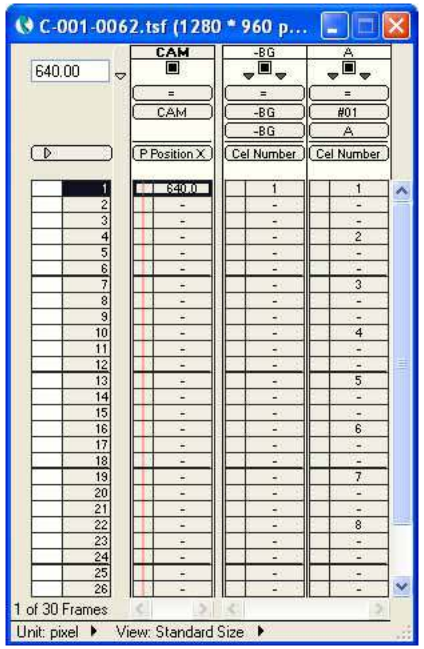
File name:

Files of type: Shooting X-Sheet file (*.tsf)

② For the [Save as type], select [Shooting X-sheet file(*.tsf)].

③ Open the saving destination (the original) scene folder.

④ Click the [Save] button to save the file as a [Shooting X-sheet file(*.tsf)].


C-001-0062.tsf (1280 * 960 p…
640.00
=
CAM
-BG
#01
A

	CAM	-BG	A
	P Position X	Cel Number	Cel Number
1	640.0	1	1
2	-	-	-
3	-	-	-
4	-	-	2
5	-	-	-
6	-	-	-
7	-	-	3
8	-	-	-
9	-	-	-
10	-	-	4
11	-	-	-
12	-	-	-
13	-	-	5
14	-	-	-
15	-	-	-
16	-	-	6
17	-	-	-
18	-	-	-
19	-	-	7
20	-	-	-
21	-	-	-
22	-	-	8
23	-	-	-
24	-	-	-
25	-	-	-
26	-	-	-

1 of 30 Frames

Unit: pixel View: Standard Size

⑤ Double-clicking on the created [Shooting X-sheet file] will show the X-sheet window.

Inputting parameters in data cells

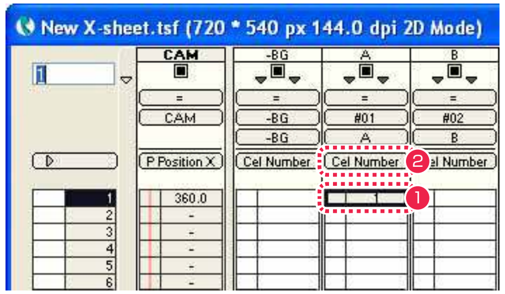
An explanation is given of the method of inputting parameters to [Data Cells].

1.Selecting the frame to which the parameter is to be input

Select the [Data Cell] in which the parameter is to be input.

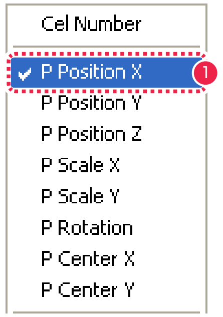
① Select the [Data Cell].

② Click to open the [Parameter Selection] Menu.


New X-sheet.tsf (720 * 540 px 144.0 dpi 2D Mode)
CAM
-BG
A
B
#01
#02
P Position X
Cel Number
360.0
②
①

2. Selecting the parameter

① Select the type of parameter from the [Parameter Selection] Menu.


Cel Number
P Position X
①
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation
P Center X
P Center Y

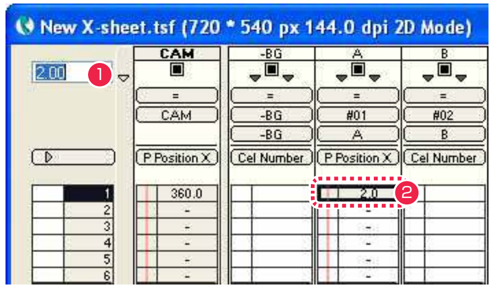
3. Finishing the input of the parameter

Input the parameter from the keyboard.

① Input single-byte numerals in the parameter input field.

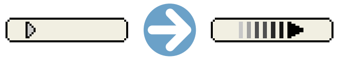
② Press the [Enter] key to confirm the input.

* The [Cel Number] can also be input as single-byte alphabetical characters.


New X-sheet.tsf (720 * 540 px 144.0 dpi 2D Mode)
2.00
①
CAM
-BG
A
B
#01
#02
P Position X
Cel Number
360.0
2.0
②

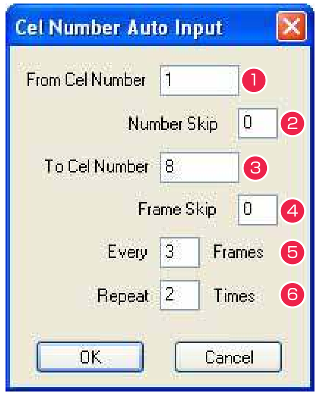
Syncing the parameter switching

By setting the [Sync] button to "on", it will be possible to switch the X-sheet layer shooting parameter types for all layers at once, rather than switching each layer [Input Parameter Selection] Menu individually.



Automatic input of cel numbers

Regarding the selection on the X-sheet, the cel numbers are automatically input following fixed rules. Select the layer, then select [Cel Number Auto Input...] from the [X-sheet] menu. After conducting the setting, click the [OK] button.



Cel Number Auto Input

From Cel Number 1 ①

Number Skip 0 ②

To Cel Number 8 ③

Frame Skip 0 ④

Every 3 Frames ⑤

Repeat 2 Times ⑥

① Starting number

② Cel number increasing amount. If this is set to "0", the cel numbers will be increased without leaving spaces between the numbers.

③ Finishing number

④ Interval between frame and frame. If this is set to "0", automatic input will be carried out without leaving spaces between the data cells.

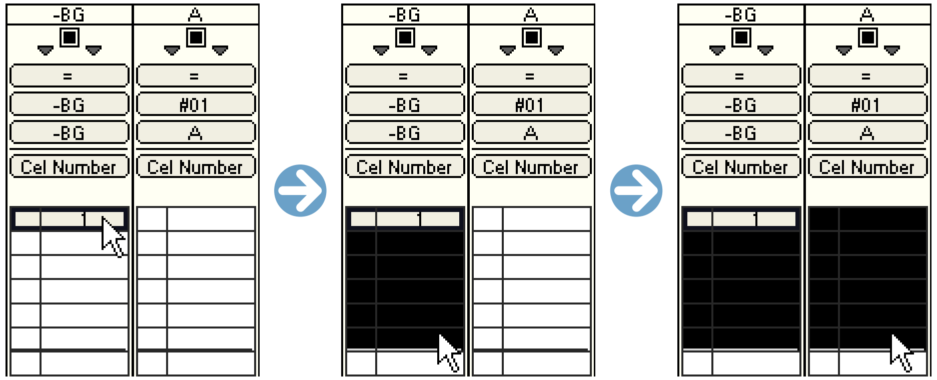
⑤ Number of data cells input each time.

⑥ Number of repetitions (If "0" is input, the data will be repeated indefinitely until the end of the X-sheet).

Creating a selection

The selection in the X-sheet can be specified by clicking and dragging. The number that is input in the input field will be loaded to the selected data cells.

Clicking on a data cell will select this 1 frame. Dragging will allow specification of a number of sequential frames or layers.



POINT

Select all by double-clicking

By double-clicking on the layer title bar, all of the frames (data cells) of the layer will be selected.

Selection using [Shift] + clicking

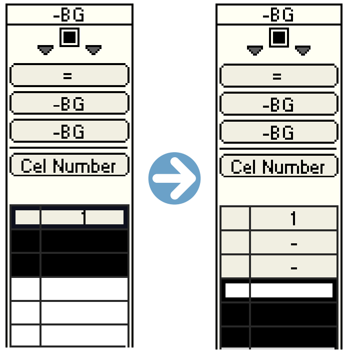
By clicking while holding down the [Shift] key, it is possible to select in the same way as by dragging.

Different types of layers cannot be selected together

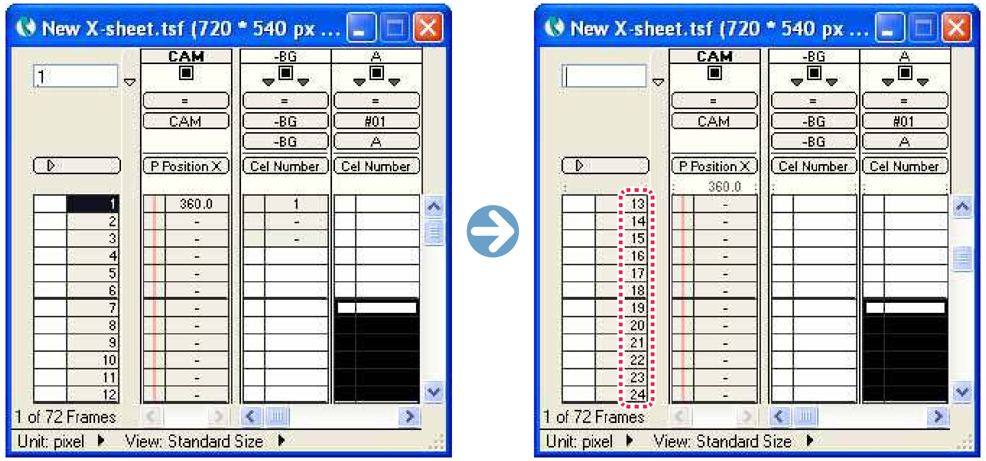
When selecting, each of the [Cel Layers] (-BG Layer), [Sub-cel Layers], [Camera Layers] and [Effect Layers] will be differentiated. It will not be possible to select different types of layers together.
For [Effect Layers], it will not be possible to select several layers together in any situation.

Moving the selection

The selection can be moved using the arrow keys. In addition, when value input (value confirmation) is carried out using the [Enter] key, the selection will be automatically moved by the same amount in the down direction.



In the case where the selection falls outside the X-sheet view area, the X-sheet will automatically scroll so that the selection will continue to be shown in the window.



POINT

Selection current layer

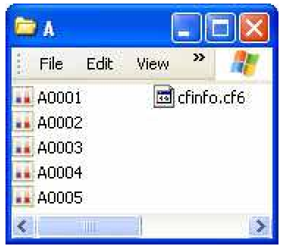
By clicking the layer title bar to change the current layer, the selection will move to the current layer. When the selection is on an [Effect Layer] or [Sub-cel Layer (Upper Cel/Lower Cel), collapsing the layer will move the selection to the [Cel Layer].

Cel auto arrange

Using the sequential numbers allocated to the image files, it will be possible to automatically arrange images that have been loaded in the cel bank to the X-sheet. When exporting using CoreRETAS HD, in the situation where the [Do Not Export Same Image] setting has been selected in the [Export] dialog box, frames that have the same image will be skipped and an empty sequentially numbered image will be exported.
The [Cel Auto Arrange] function is a particularly convenient function when used for re-reading these kinds of sequentially numbered images back into CoreRETAS HD.

1. Preparing sequentially numbered images

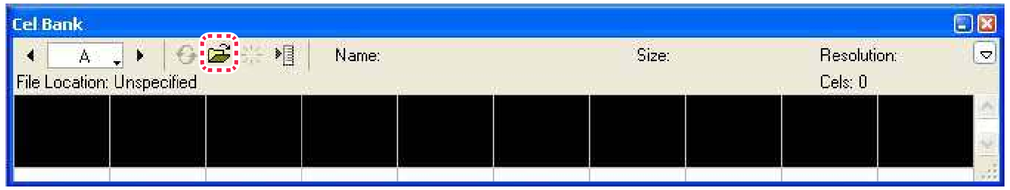
Arrange the image files that have the frame number attached to the end of the image file name.



A0001
A0002
A0003
A0004
A0005
cfinfo.cf6

2. Reading the images into the cel bank

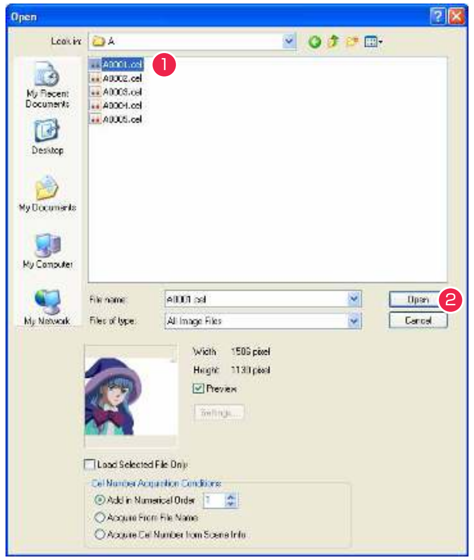
Press the cel bank [Load...] button.



Name:
Size:
Resolution:
File Location: Unspecified
Cels: 0

3. Open dialog box

The [Open] dialog box will be shown.

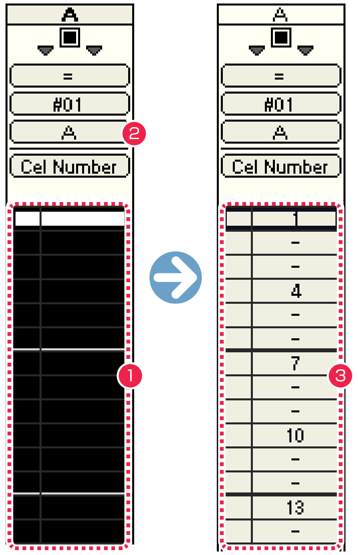


Look in: A
File name: A0001.cel
Files of type: All Image Files
Width 1505 pixel
Height 1130 pixel
☑ Preview
☐ Load Selected File Only
Cel Number Acquisition Conditions
● Add in Numerical Order 1
○ Acquire From File Name
○ Acquire Cel Number from Scene Info

1. Select any file.
2. Click the [Open] button.

4. Finishing

Open the X-sheet.



1. Select the layer frames where the images are to be read in.
2. Select the cel bank in which the sequentially numbered images have been read in.
3. By selecting [Cel Auto Arrange] from the [X-sheet] menu, the relevant cel numbers will be input to the frames corresponding to the numbers of the sequentially numbered image files.
Ex.: [A0007.cel] will be read in to the 7th Frame.

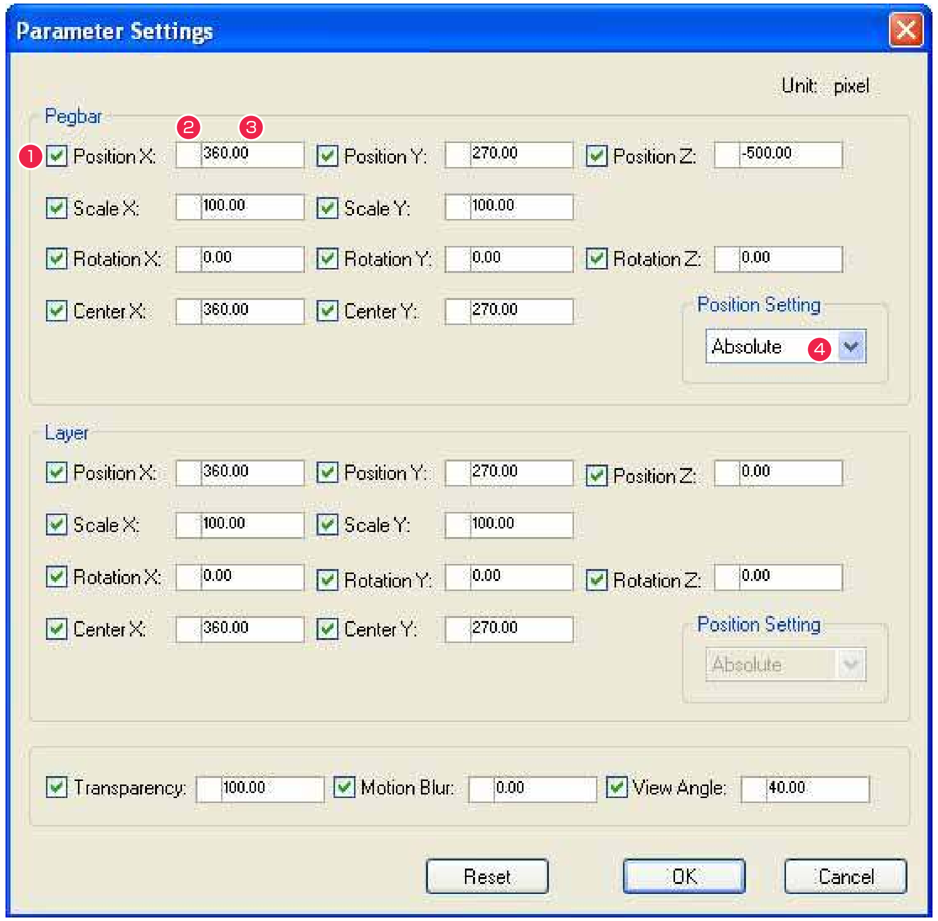
POINT

For image files produced using software other than RETAS!PRO HD

As long as the image files have file names that include the frame numbers, it will be possible to automatically arrange images, even those that have not been produced by RETAS!PRO HD.

Batch input of parameters

It is possible to input several parameters for one [Data Cell] all together. The [Parameter Settings] dialog box can be shown either by double-clicking on the [Data Cell] or by selecting [Parameter Settings...] from the [X-sheet] menu while the cel is selected.



Parameter Settings

Unit: pixel

Pegbar ② ③

① ☑ Position X: 360.00 ☑ Position Y: 270.00 ☑ Position Z: -500.00

☑ Scale X: 100.00 ☑ Scale Y: 100.00

☑ Rotation X: 0.00 ☑ Rotation Y: 0.00 ☑ Rotation Z: 0.00

☑ Center X: 360.00 ☑ Center Y: 270.00

Position Setting: Absolute ④

Layer

☑ Position X: 360.00 ☑ Position Y: 270.00 ☑ Position Z: 0.00

☑ Scale X: 100.00 ☑ Scale Y: 100.00

☑ Rotation X: 0.00 ☑ Rotation Y: 0.00 ☑ Rotation Z: 0.00

☑ Center X: 360.00 ☑ Center Y: 270.00

Position Setting: Absolute

☑ Transparency: 100.00 ☑ Motion Blur: 0.00 ☑ View Angle: 40.00

[Pegbar/ Layer]

Carries out numerical input and key frame setting for each of the parameters of the pegbar or layer. In the situation where the cel number has not been input, it will not be possible to use [Layer].

① Parameter Check Box

Parameters that have their check boxes checked can be set.

② Key Frame Area

Carries out key frame setting.

When this area is clicked, the setting will be changed from [Continuous Key Frame] to [Non-continuous Key Frame] to [No Key Frame] in turn. However, when the selection on the X-sheet encompasses several data cells, or when [Auto Refresh] in the [Inbetweening] palette is set to on, it will not be possible to select the key frame area.

③ Parameter Area

Parameters are input as numerical values.

④ [Position Setting] Menu

- Absolute

  The input parameters will be loaded to the X-sheet as they are.
- Relative

  The input parameters are added to the values that have already been loaded in the X-sheet. It will also be possible to input minus values.
- Scale Relative

  The input parameters are multiplied by that frame`s scale value and the amount is added to the values that have already been loaded in the X-sheet. Accordingly, when the cel has been enlarged, a larger amount will be added, and when the cel is reduced, a smaller amount is added.

- [Transparency]

  The transparency is set.

- [Motion Blur]

  The motion blur is set.

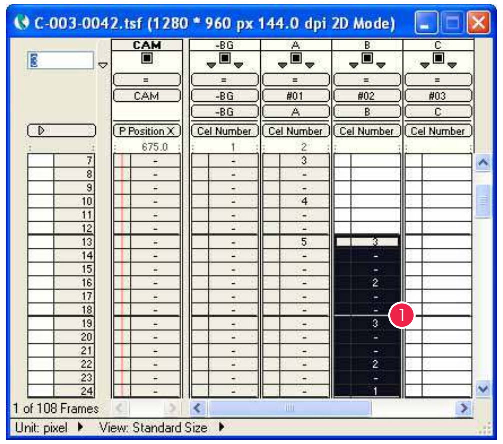
- [View Angle]

  The perspective projection in 3D camera mode is set (only in the camera layer).

Copying and pasting parameters

It is possible to copy parameters that have been input to the X-sheet, and to paste them in a different location.

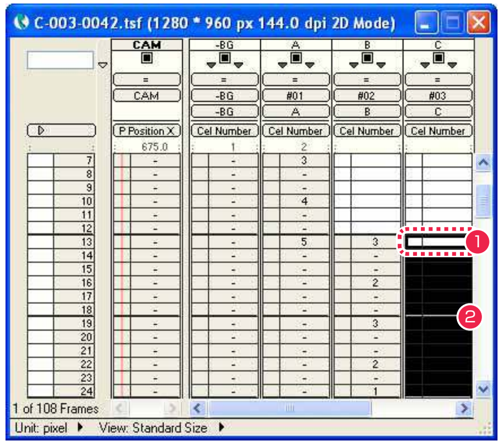
1.Copying the required part

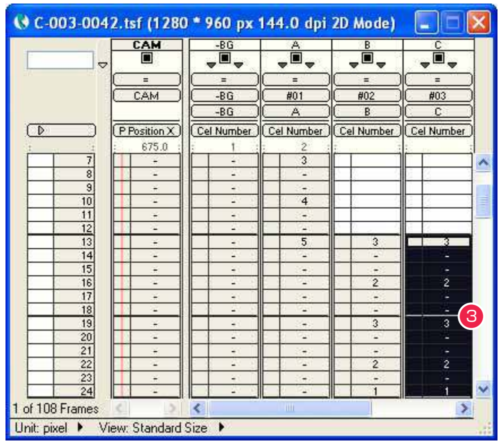

C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
CAM
-BG
A
B
C
P Position X
Cel Number
1 of 108 Frames
Unit: pixel
View: Standard Size
①

① Drag to selection that is to be copied. For more details of how to create the X-sheet selection, see [Creating the Selection].

② Select [Copy] from the [Edit] menu.

2. Selecting the pasting location


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
1 of 108 Frames
Unit: pixel
View: Standard Size
①
②


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
1 of 108 Frames
Unit: pixel
View: Standard Size
③

① Click to select the starting point of the pasting location.

② Select [Select Copied Range] from the [Edit] menu to select the portion of the copied range.

③ Select [Paste] from the [Edit] menu to transfer the copied content to the selection.

POINT

Copying selection will simultaneously copy all of the parameters of the layer frame (cel number, position coordinates, etc.)

Pasting only selected parameters

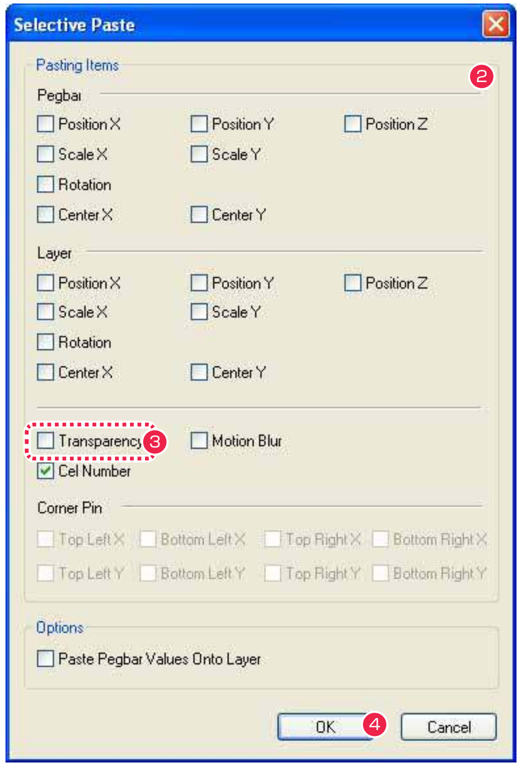
When pasting parameters into the X-sheet, it is possible to paste only selected parameters.

1. Copying the required part

① Select that is to be copied by dragging. For more details of how to create the X-sheet selection, see [Creating the Selection].

② Select [Copy] from the [Edit] menu.

2. Selecting the paste contents


Selective Paste
②
③
④
OK
Cancel

Pasting Items

Pegbar

☐ Position X ☐ Position Y ☐ Position Z
☐ Scale X ☐ Scale Y
☐ Rotation
☐ Center X ☐ Center Y

Layer

☐ Position X ☐ Position Y ☐ Position Z
☐ Scale X ☐ Scale Y
☐ Rotation
☐ Center X ☐ Center Y

☐ Transparency ☐ Motion Blur
☑ Cel Number

Corner Pin

☐ Top Left X ☐ Bottom Left X ☐ Top Right X ☐ Bottom Right X
☐ Top Left Y ☐ Bottom Left Y ☐ Top Right Y ☐ Bottom Right Y

Options

☐ Paste Pegbar Values Onto Layer

① Drag to selection of the pasting location on the X-sheet.

② Select [Selective Paste...] from the [Edit] menu to show the [Selective Paste] dialog box.

③ Set the check boxes of the parameter items that are to be pasted to the "on" condition.

④ Click the [OK] button to paste only the selected parameters.

Inserting a frame by pasting

When pasting parameters into the X-sheet, the same number of frames copied into the copy buffer will be inserted by pasting.

① The pasting will be implemented by selecting [Insert and Paste] from the [Edit] menu.

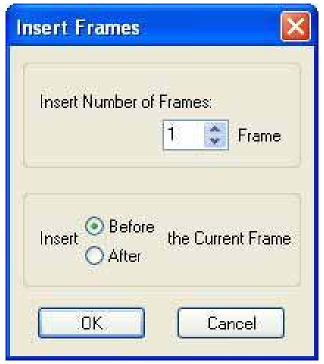
As a result of carrying out insert and paste, data that was pushed outside the X-sheet will be deleted unless the [Edit] menu [Undo] command is executed.

Inserting frames

This inserts frames in the X-sheet. By selecting [Frame] -> [Insert] from the [X-sheet] menu, the selected number of frames in the [Frame Number View] area will be inserted at the selected frame.

Inserting a specified number of frames

This inserts frames in the X-sheet. Selecting [Frame] -> [Insert (Specified Number)...] from the [X-sheet] menu will show the [Insert Frame] dialog box. After conducting the setting, press the [OK] button.



- [Insert Number of Frames]
  Specify the number of frames to be newly inserted.
- [Insert Before/ After the Current Frame]
  Select whether the frames are to be inserted before or after the current frame.

Deleting frames

This deletes frames from the X-sheet. By selecting [Frame] -> [Delete...] from the [X-sheet] menu, the frames that are selected in the [Frame Number View] area will be deleted.

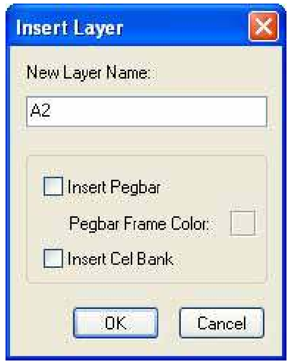
POINT

About inserting frames

When frames are inserted, the length of the X-sheet (number of frames) will become longer by the inserted amount. The parameters of the inserted frames will be the initial values set when the new X-sheet was created.

Inserting a layer

Inserts a layer in the X-sheet. Selecting [Layer] -> [Insert...] from the [X-sheet] menu will show the [Insert Layer] dialog box. After conducting the setting, press the [OK] button.

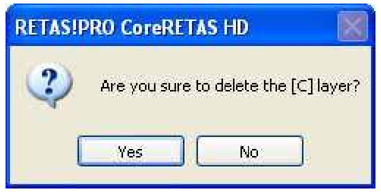


New Layer Name: A2

- New Layer Name
  Insert the name of the layer to be newly inserted.
- [Insert Pegbar]
  Insert a pegbar and connect it to the layer created.
- [Pegbar Frame Color]
  Allows determining of the frame color of the newly inserted pegbar. By clicking the color box, the color picker will be shown, allowing the color to be selected.
- [Insert Cel Bank]
  Insert a cel bank and connect it to the created layer.

Deleting a layer

By clicking on the title bar of the layer that is to be deleted and selecting [Layer] -> [Delete] from the [X-sheet] menu, the layer will be deleted. At minimum, one camera layer and one cel layer are required, and deletion will not be possible when the number of camera layers or cel layers after deletion has become "0".



Are you sure to delete the [C] layer?

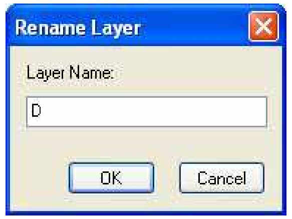
POINT

For pegbars and cel banks connected Immediately after layer insertion

Pegbars connected to layers immediately after insertion will be shown last on the pegbar selection menu. Cel banks connected to layers immediately after insertion will be shown last on the cel bank selection menu.

Changing a layer name

This changes the X-sheet layer name. By selecting [Layer] -> [Rename...] from the [X-sheet] menu, the [Rename Layer] dialog box will be shown. Input the name as 10 characters or less of single-byte characters. Clicking the [OK] button will change the layer name.



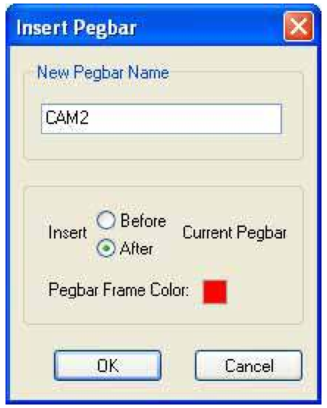
Layer Name: D

Resetting a layer

In the situation where an optional cel layer or camera layer is selected and [Layer] -> [Reset] is selected from the [X-sheet] menu, the parameters set to the layer will return to their default values.
The [Cel Number] parameter will not return to the default value.

Inserting a pegbar

This inserts a new pegbar. By selecting [Pegbar] -> [Insert...] from the [X-sheet] menu, the [Insert Pegbar] dialog box will be shown. After conducting the setting, press the [OK] button. The pegbar immediately after insertion will not be connected to any layer.



New Pegbar Name: CAM2

Insert ○ Before ● After Current Pegbar

Pegbar Frame Color: 🟥

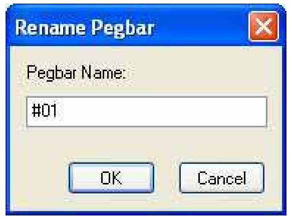
- New Pegbar Name
  Inputs the name of the newly inserted pegbar.
- [Insert Before/ After the Current Pegbar]
  Determines the position of the newly inserted pegbar. Allows selection of whether the pegbar is inserted before or after the current pegbar.
- [Pegbar Frame Color]
  Allows selection of the newly inserted pegbar frame color. By clicking the color box, the color picker will be shown, allowing the color to be selected.

Deleting a pegbar

Deletes the current pegbar (the pegbar selected on the stage). By selecting [Pegbar] -> [Delete] from the [X-sheet] menu, the current pegbar will be deleted.

Changing the pegbar name

This changes the current pegbar name. By selecting [Pegbar] -> [Rename...] from the [X-sheet] menu, the [Rename Pegbar] dialog box will be shown. Input the name as 10 characters or less of single-byte characters. Clicking the [OK] button will change the pegbar name.

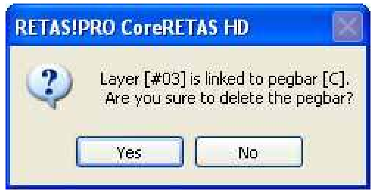


Pegbar Name: #01

POINT

Layers connected to deleted pegbars

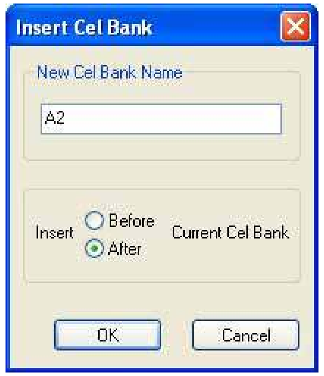
In the situation where there is a layer connected to the pegbar that is to be deleted, a dialog box will be shown to confirm the deletion. Layers that have had their destination link pegbar deleted will be automatically connected to the pegbar listed last on the pegbar selection menu. Unless there is a particular reason, remove all the layers connected to a pegbar before deleting it.



Layer [#03] is linked to pegbar [C].
Are you sure to delete the pegbar?

Inserting a cel bank

This inserts a new cel bank. By selecting [Cel Bank] -> [Insert...] from the [X-sheet] menu, the [Insert Cel Bank] dialog box will be shown. After conducting the setting, press the [OK] button. Cel banks immediately after insertion will not be connected with any layer.



New Cel Bank Name: A2

Insert ○ Before ● After Current Cel Bank

- New Cel Bank Name
  Inputs the name of the newly inserted cel bank.
- [Insert Before/After the Current Cel Bank]
  Determines the position of the newly inserted cel bank. Allows selection of whether the cel bank is inserted before or after the current cel bank.

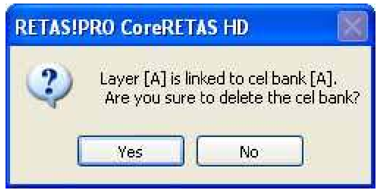
Deleting a cel bank

This deletes the current cel bank. By selecting [Cel Bank] -> [Delete] from the [X-sheet] menu, the cel bank will be deleted.

POINT

Layers connected to deleted cel banks

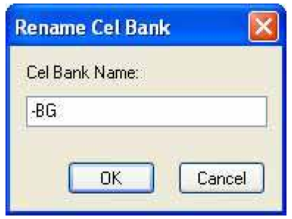
In the situation where there is a layer connected to the cel bank that is to be deleted, a dialog box will be shown to confirm the deletion. Layers that have had their destination link cel bank deleted will be automatically connected to the cel bank listed last on the [cel bank selection] menu. Unless there is a particular reason, remove all the layers connected to a cel bank before deleting it.



Layer [A] is linked to cel bank [A].
Are you sure to delete the cel bank?

Changing the cel bank name

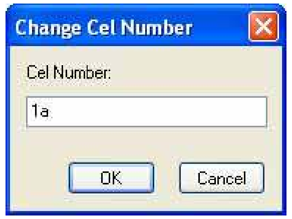
Changes the name of the current cel bank. By selecting [Cel Bank] -> [Rename Cel Bank...] from the [X-sheet] menu, the [Rename Cel Bank] dialog box will be shown. Input the name as 10 characters or less of single-byte characters. Clicking the [OK] button will change the cel bank name.



Cel Bank Name: -BG

Changing the cel number

Changes the cel number of the image (layer image) loaded in the current cel bank. By selecting [Cel Bank] -> [Change Cel Number...] from the [X-sheet] menu, the [Change Cel Number] dialog box will be shown. Clicking the [OK] button will change the cel number.



Cel Number: 1a

Selecting a PSD image

Selects images (PSD format layer images) loaded in the cel bank. By selecting [Cel Bank] -> [Select Layer Image...] from the [X-sheet] menu, the images will be selected.

Selecting all PSD images

Selects all images (PSD format layer images) loaded in the cel bank. By selecting [Cel Bank] -> [Select All Layer Images...] from the [X-sheet] menu, all the images will be selected.

Moving to the first frame

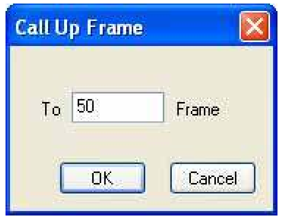
By selecting [To First Frame] from the [X-sheet] menu, the current frame will become the first frame of the X-sheet.

Moving to the last frame

By selecting [To Last Frame] from the [X-sheet] menu, the current frame will become the last frame of the X-sheet.

Calling up an optional frame

By selecting [Call Up Frame...] from the [X-sheet] menu, the [Call Up Frame] dialog box will be shown.
If the required call-up frame number is input and the [OK] button is clicked, the specified frame will become the current frame. In the situation where [X-sheet View] (Selecting [Sheet Settings] -> [General...] in the [X-sheet]) is set to [Seconds + Frames], the input should be in a format such as [5 + 10] (= 5 seconds plus 10 frames).



Call Up Frame

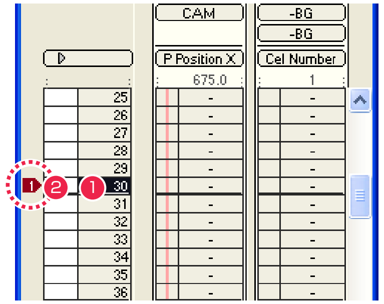
To 50 Frame

Calling up the current frame

By selecting [Call Up Current Frame...] from the [X-sheet] menu, the current frame that is outside the view range due to scrolling will be shown in the center of the X-sheet.

Placing a marker

The marker is a function for marking points on the X-sheet. An optional frame can be instantaneously called up on the X-sheet, and selection can be carried out between two optional points.



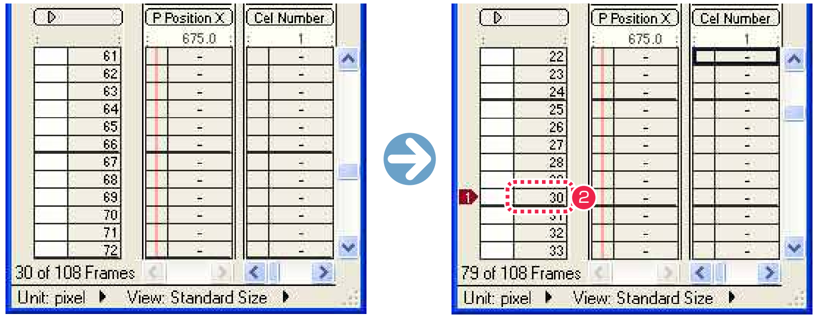
① Select the frame where the marker is to be placed to set it as the current frame.

② While pressing the [Alt/Opt] key, press an optional number key between [1] and [0].

Ex.: Press [Alt/Opt] + [1] to place the marker No. 1 at the 30th Frame.

Calling up a marker

Using the following procedure, it is possible to call up the marker. However, this will only show the part of the X-sheet where the marker has been placed, and is not a function to move the current frame. To call up the current frame of the X-sheet, use the [Call Up Current Frame] command.



30 of 108 Frames

Unit: pixel View: Standard Size

79 of 108 Frames

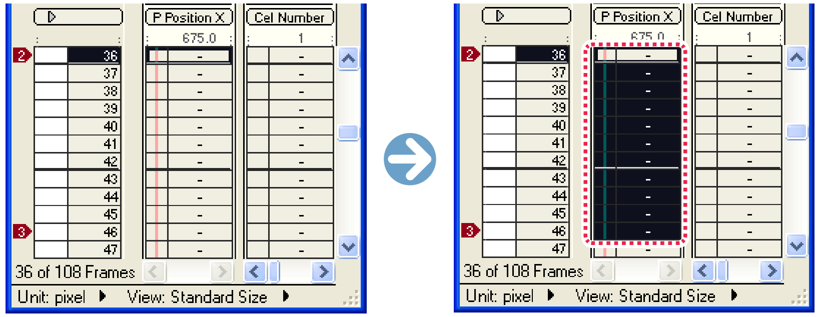
Unit: pixel View: Standard Size

① While pressing the [Shift] key, press the numerical keys (keypad keys cannot be used) corresponding to the marker that is to be called up.
Ex.: Press [Shift] + [1] to call Marker No. 1 to the 1st Frame.

② The called up marker will be shown in the center of the X-sheet.

Creating a selection using markers

Using the following procedure, the markers can be utilized to carry out selection.
Ex.: When selecting between Markers [2] and [3].



36 of 108 Frames

Unit: pixel View: Standard Size

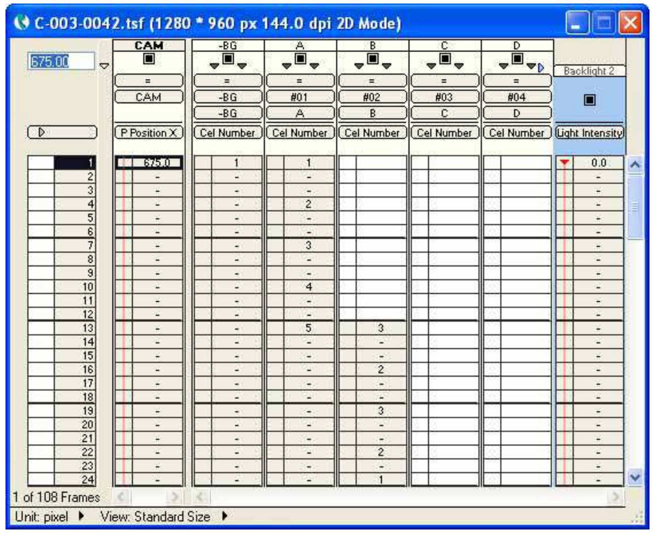
36 of 108 Frames

Unit: pixel View: Standard Size

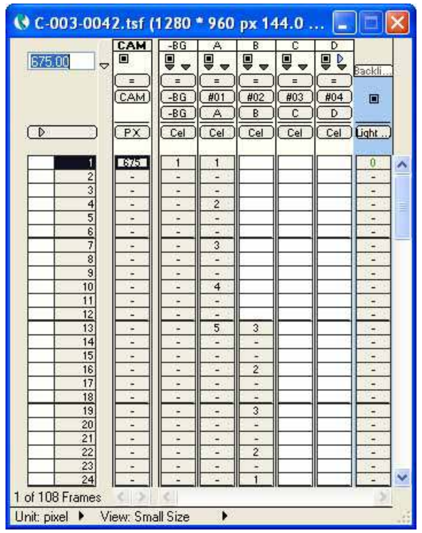
① Immediately after pressing [Shift] + [2], press [3] without removing your finger (In essence, press [Shift] + [2] + [3]). (Keypad keys cannot be used.)

Changing the view size

By selecting [X-sheet View] from the [X-sheet] menu, the X-sheet view size can be switched between [Standard] and [Small]. In [Small] view, the horizontal width of each layer can be narrowed so that it will be possible to show more layers.


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
675.00
CAM
-BG
A
B
C
D
P Position X
Cel Number
Light Intensity
Backlight 2
1 of 108 Frames
Unit: pixel
View: Standard Size

Standard Size


C-003-0042.tsf (1280 * 960 px 144.0 ...
675.00
CAM
PX
Cel
Light
1 of 108 Frames
Unit: pixel
View: Small Size

Small Size

Collapsing the X-sheet

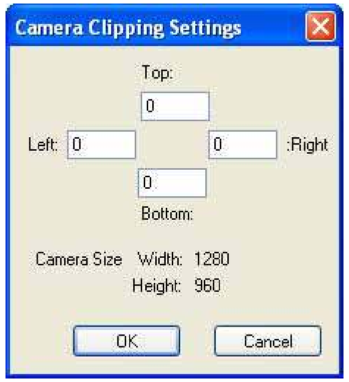
By selecting [Collapse Sheet] from the [X-sheet] menu, it is possible to close all of the opened [Sub-cel Layers], [Effect Layers], and [Sound Layers] that are being shown on the current X-sheet.

Expanding the X-sheet

Selecting [Expand Sheet] from the [X-sheet] menu will open out all the [Sub-cel Layers], [Effect Layers], and [Sound Layers] with parameters that have been input in the currently selected X-sheet.

Changing the camera clipping settings

By selecting [Sheet Settings] -> [Camera Clipping Settings...] from the [X-sheet] menu, the camera clipping position is set. The clipped areas will be ignored when carrying out rendering, and will not be rendered.


Camera Clipping Settings
OK
Cancel

Top: 0
Left: 0
Right: 0
Bottom: 0
Camera Size Width: 1280
Height: 960

- [Top]
  Specify number of pixels of the clipping area from the top of the camera frame.
- [Left]
  Specify number of pixels of the clipping area from the left of the camera frame.
- [Bottom]
  Specify number of pixels of the clipping area from the bottom of the camera frame.
- [Right]
  Specify number of pixels of the clipping area from the right of the camera frame.

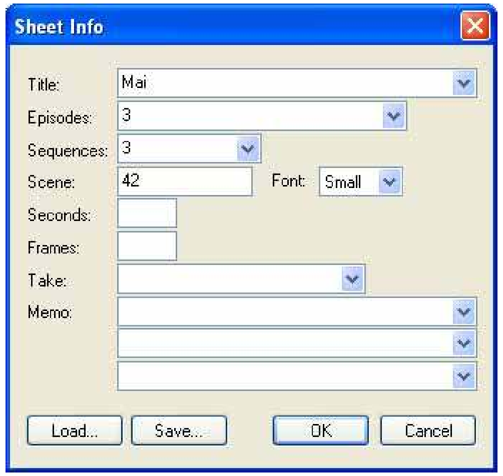
Ex.:
Top = 200
Left = 0
Bottom = 200
Right = 0

The 200-pixel portion areas at the top and bottom of the screen will be ignored during rendering. However, this is only when rendering is carried out, and the exported image size will be 1280 x 960 pixels, the same as the camera size.

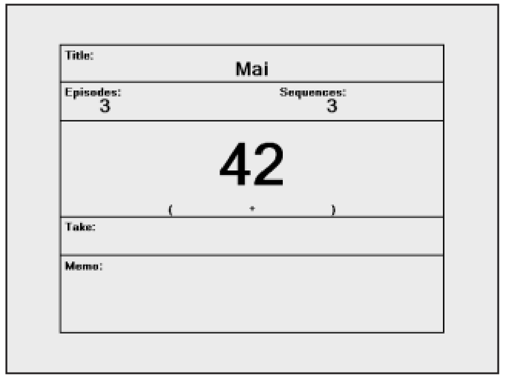
- [Camera Size]
  Shows the camera frame size specified in the current X-sheet.

Setting the work information (board)

By selecting [Sheet Settings] -> [Info...] from the [X-sheet] menu, the [Sheet Info] dialog box will be shown. Using [Sheet Info Export], it will be possible to write in information such as the title and episode number to the X-sheet and realize the function of recording [Board] information (an image inserted at the start of the scene incorporating the scene number and take number) at the head of the scene during recording.



Title: Mai
Episodes: 3
Sequences: 3
Scene: 42
Font: Small
Seconds:
Frames:
Take:
Memo:



Title: Mai
Episodes: 3
Sequences: 3
42
(+)
Take:
Memo:

- [Title]
  Input the animation title.
- [Episodes]
  Input the episode.
- [Sequences]
  Input the sequence number.
- [Scene]
  Input the scene number.
- [Font]
  Specify the font size.
- [Seconds]
  Input the number of seconds.
- [Frames]
  Input the remaining number of frames less than 1 second in length.
- [Take]
  Input the number of takes.
- [Memo]
  Input memo information. This may be used for conveying messages to the person in charge of editing.
- [Load...]
  This may be used to load text files (Extension: txt) containing X-sheet information.
- [Save...]
  This may be used to export the X-sheet information as a text file (Extension: txt).

POINT

About previously input titles, episodes, and memos

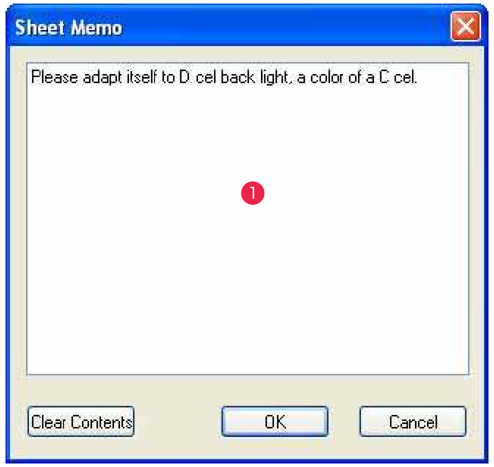
Because previously input information such as titles, episodes and memos will be registered in the pull-down menus to the right of the boxes, the information can be selected from the menus. A maximum of 10 previously input episodes are registered.

The X-sheet information is different from the general settings

The information set using the [Sheet Info] dialog box is only used for making the [Board] during [Sheet Info Export]. It is therefore different from the X-sheet [General] settings and will not be reflected in the [Sheet Settings].

Inputting a memo

By selecting [Sheet Settings] -> [Memo...] from the [X-sheet] menu, the [Sheet Memo] dialog box will be shown. This will allow memos to be added to the X-sheet.



Please adapt itself to D cel back light, a color of a C cel.

① [Memo Input] Area
Text input will be possible using the keyboard.

- [Clear Contents] Button
  Clears the contents of the memo input area.

POINT

About memos

Memos are displayed in the foreground when opening an X-sheet file. Because other operations can not be carried out until the [OK] or [Cancel] button is pressed, this is a certain way to convey the information to other people.

Saving X-sheets

Selecting [Save] from the [File] menu saves the X-sheet.
In the situation where the X-sheet has been newly created and has not yet been saved, the Save dialog box will be shown. Pressing the [Save] button will newly save the X-sheet. When there is a file name with the same name in the folder, the previous file will be overwritten.

Saving X-sheets as

Selecting [Save As...] from the [File] menu shows a dialog box. By inputting the X-sheet name and pressing the [Save] button, the currently open shooting X-sheet will be saved under the different name.

Saving copies of X-sheets

Selecting [Save As...] from the [File] menu shows a dialog box.
By clicking to check the [Save Copy] box and pressing the [Save] button, a copy of the currently open shooting X-sheet will be saved under the different name.

Opening X-sheets

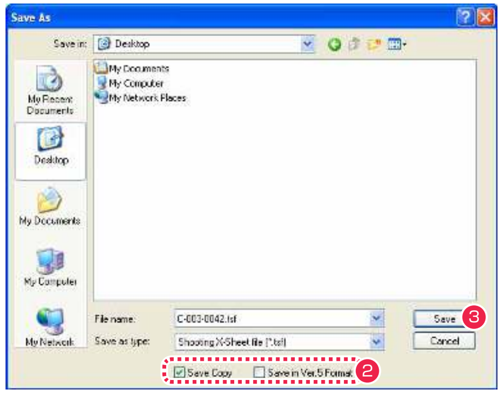
By selecting [Open] -> [X-sheet...] from the [File] menu, the [Open] dialog box will be shown. Selecting an X-sheet file will open the shooting X-sheet (Extension: tsf).

Closing X-sheets

By selecting [Close] from the [File] menu, the currently open shooting X-sheet will be closed.

Saving X-sheets in CoreRETAS ver.5 format

The X-sheet can be saved in CoreRETAS Ver.5 format.



Save in: Desktop

File name: C-003-0042.tsf

Save as type: Shooting X-Sheet file (*.tsf)

☑ Save Copy ☐ Save in Ver.5 Format

① Select [Save As...] from the [File] menu.

② The [Save As] dialog box opens. Click to check the [Save Copy] box and the [Save as Ver.5] box in turn.

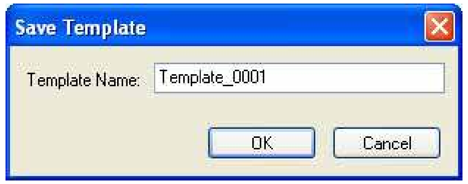
③ Pressing the [Save] button will save the currently open shooting X-sheet in Ver.5 format.

* Regarding X-sheet compatibility, refer to [X-sheet Compatibility] in [Technical Information] in Chapter 8: Reference.

Saving an X-sheet as a template

It is possible to save an often-used fixed format X-sheet as a template.
By selecting [Save Template...] from the [File] menu, the [Save Template] dialog box will be shown. Inputting the template name and pressing [OK] will save the X-sheet as a template.

This is convenient in situations where it is necessary to repeatedly create X-sheets that have a fixed format, such as when a text filter must be placed above the uppermost layer in all X-sheets.



Template Name: Template_0001

Opening an X-sheet template

By selecting [Template] from the [File] menu, a menu will be shown. Selecting the template name will open the saved X-sheet template.

Loading a sound file

It is possible to load a sound file to the [Sound] column, and to synchronize the playing of the images and sound.

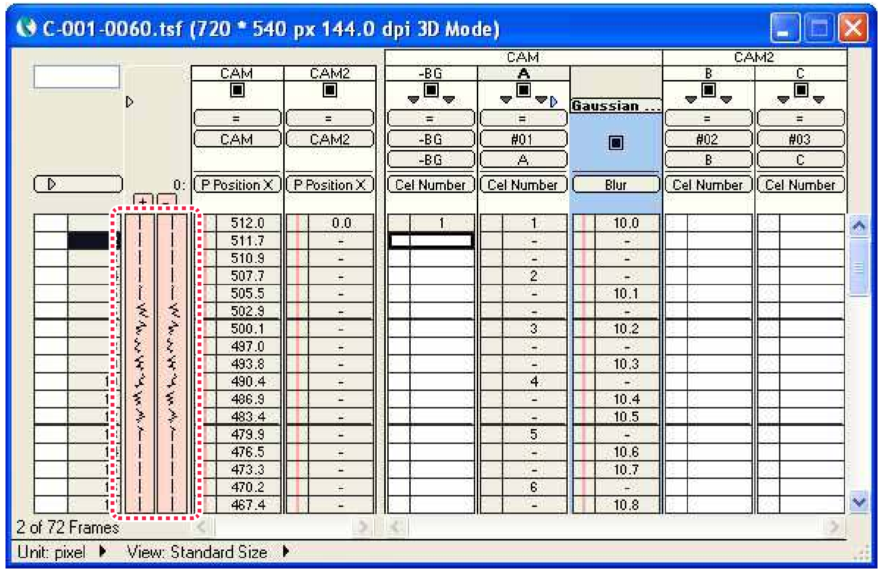
Supported formats: WAV, AIFF

1. Selecting the sound file

By selecting [Sound] -> [Load...] from the [X-sheet] menu, the [Open] dialog box will be shown. Using the [Open] dialog box, select the sound file that is to be loaded to the [Sound Layer].

2. Loading and displaying the sound file

After completion of loading, the wave form of the sound file will be shown in the X-sheet [Sound Layer].



Deleting a sound file

By selecting [Sound] -> [Delete] from the [X-sheet] menu, the sound file loaded in the X-sheet will be deleted.

Playing a sound file

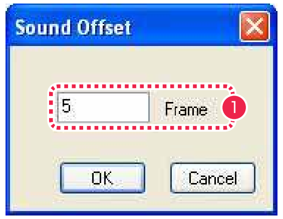
By selecting [Sound] -> [Play] from the [X-sheet] menu, the sound file loaded in the X-sheet will be played.

Stopping playback of a sound file

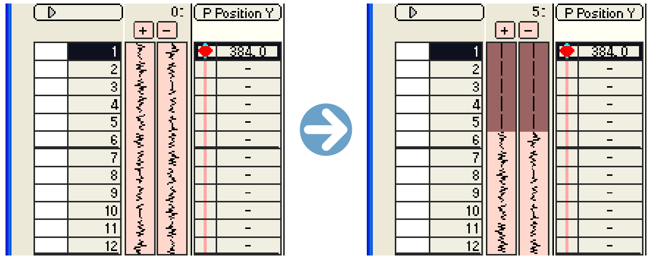
By selecting [Sound] -> [Stop] from the [X-sheet] menu while playing a sound file, the sound file playback will be stopped.

Adjusting the starting position of a sound file

By selecting [Sound] -> [Offset...] from the [X-sheet] menu, the [Sound Offset] dialog box will be shown, allowing adjustment of the sound file starting frame.



5 Frame ①



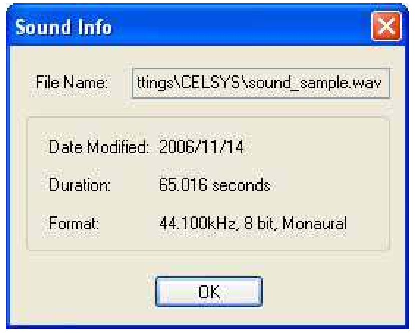
① Using the [Sound Offset] dialog box, set the number of frames that will be silent before the sound starts. Ex.: Setting [5 frames].

② The first 5 frames will be silent, and the sound will start playing from the 6th Frame.

* The adjustment of the starting position may also be carried out using the [+] and [-] buttons located above the sound layer.

Showing the sound file information

By selecting [Sound] -> [Info...] from the [X-sheet] menu, the [Sound Info] dialog box will be shown, and it will be possible to view the sound file information.



File Name: ttings\CELSYS\sound_sample.wav

Date Modified: 2006/11/14

Duration: 65.016 seconds

Format: 44.100kHz, 8 bit, Monaural

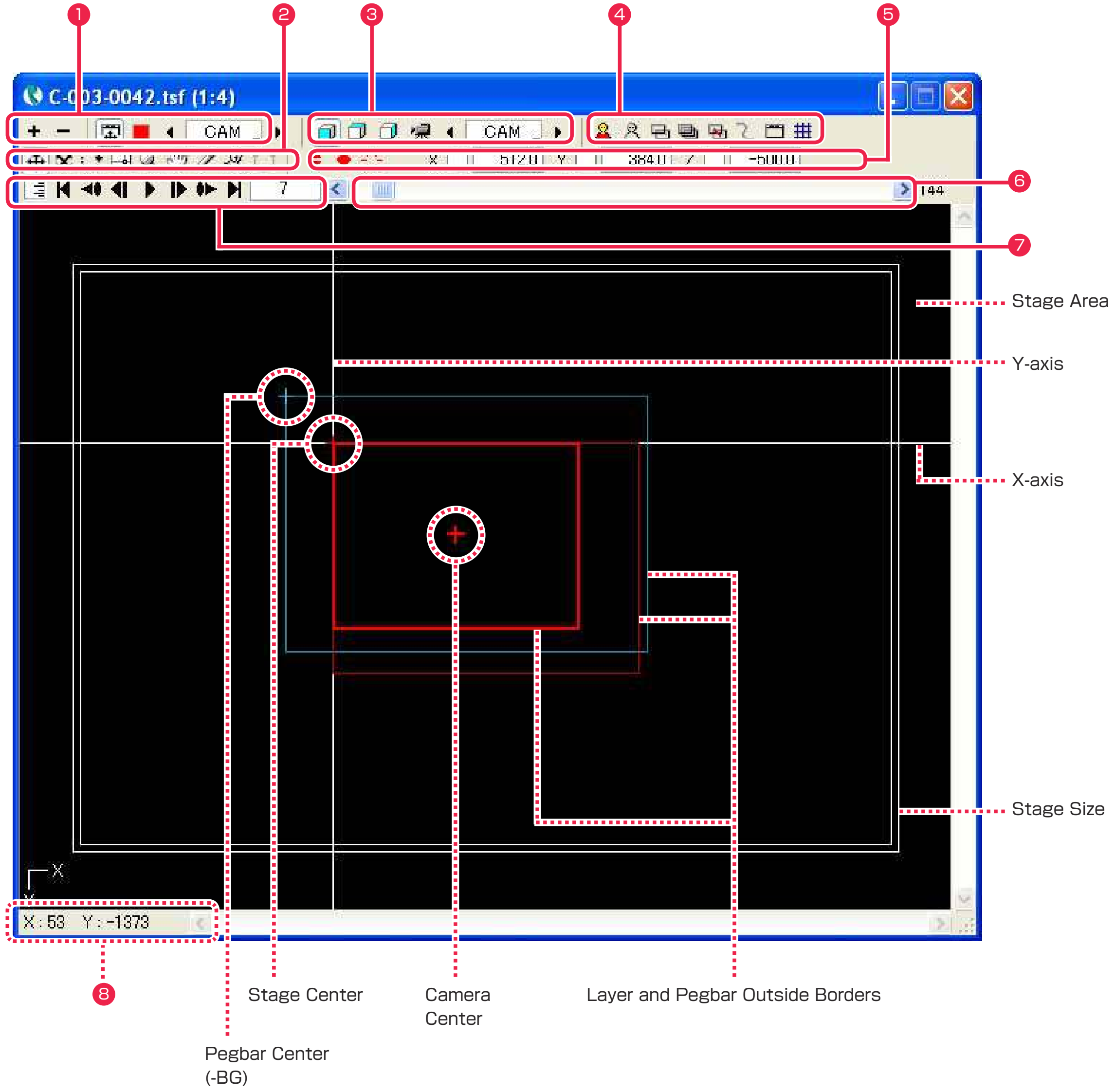
Step: 10

Understanding the stage window

In this step, an explanation is given about the stage window.

About the stage window

The [Stage] window corresponds to the camera stand, and allows confirmation and changing of the camera and cel positions and scale of the current frame to be carried out. The intersection of the vertical and horizontal axes shown in the stage area is the origin of the stage coordinates system.


①
②
③
④
⑤
⑥
⑦
⑧
C-003-0042.tsf (1:4)
CAM
CAM
5120
3840
-5000
7
144
X : 53 Y : -1373
Stage Area
Y-axis
X-axis
Stage Size
Stage Center
Camera Center
Layer and Pegbar Outside Borders
Pegbar Center (-BG)

Stage area

Area that shows the arrangement situation of the pegbars and layers.

Stage size

The stage border is shown by a double line. Parts of images projecting beyond this line will not be shown. The size of the border can be changed using the [Preferences] dialog box.

Y-axis

Shows the stage area coordinate axis in the vertical direction. In the diagram at left (front view), the right side is the positive [+] direction.

X-axis

Shows the stage area coordinate axis in the horizontal direction. In the diagram at left (front view), the bottom side is the positive [+] direction.

Stage center

This shows the stage center (X, Y, Z coordinates = 0, 0, 0).

Pegbar center

This shows the pegbar center.

Camera center

This shows the camera center.

Layer and pegbar frame view

The outside border of each layer and pegbar is shown as a colored line enclosing a rectangular area.

① Screen View panel

② Tool buttons

③ 3D Camera Angle Selecting Buttons

④ View Mode Selecting Buttons

⑤ Tool Setting Panel

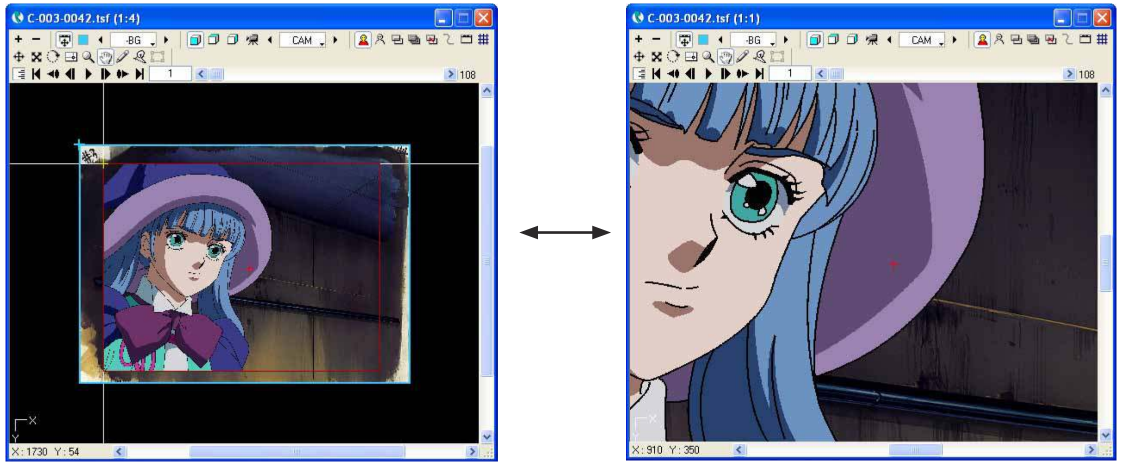
⑥ Frame Slider

⑦ Frame Control Panel

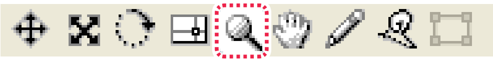
⑧ Cursor Position Information View

Stage view zoom in and zoom out

It is possible to zoom in and zoom out the view of the [Stage] window [Stage] area.

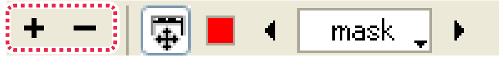


Method of using the zoom tool



Using the [Zoom] tool of the [Stage] window, it is possible to enlarge and reduce the view of the stage area. By clicking on the part of the window that is to be enlarged, the enlarged part will be shown with the clicked part shown in the center. By clicking on the part of the window that is to be reduced while pressing the [Alt/Opt] key, the reduced part will be shown with the clicked part shown in the center.

Method of using the zoom in and zoom out buttons



Using the [Stage] window [Zoom In] and [Zoom Out] buttons, it is possible to enlarge and reduce the stage area view.

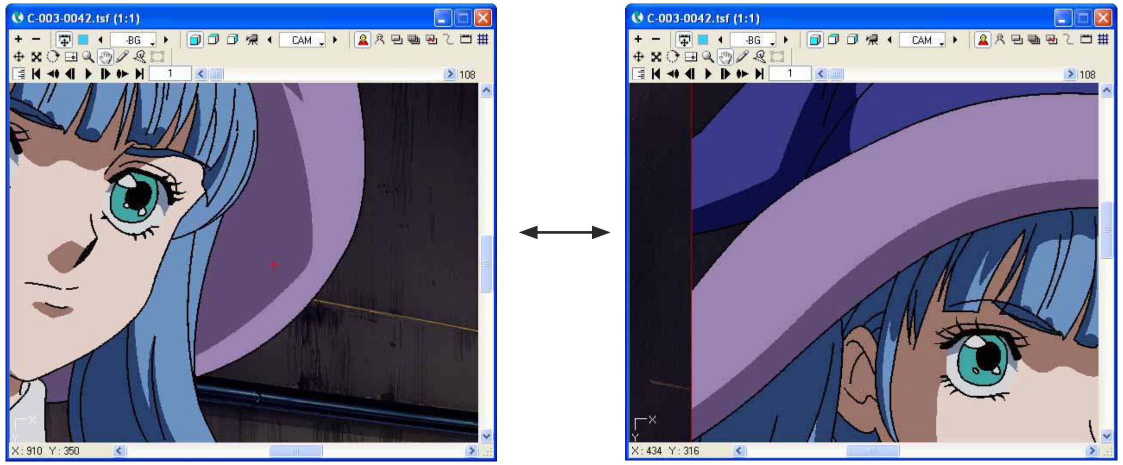
[Zoom In] button:	Shows enlarged view of stage area.
[Zoom Out] button:	Shows reduced view of stage area.

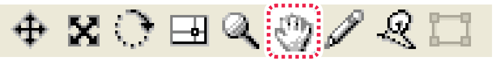
Method of using the [Stage] menu

Using each of the [Stage] menu Zoom In and Zoom Out commands, it is possible to carry out enlargement and reduction of the stage area to a selected magnification.

Scrolling the stage view

It is possible to scroll the view in the [Stage] Area of the [Stage] window.

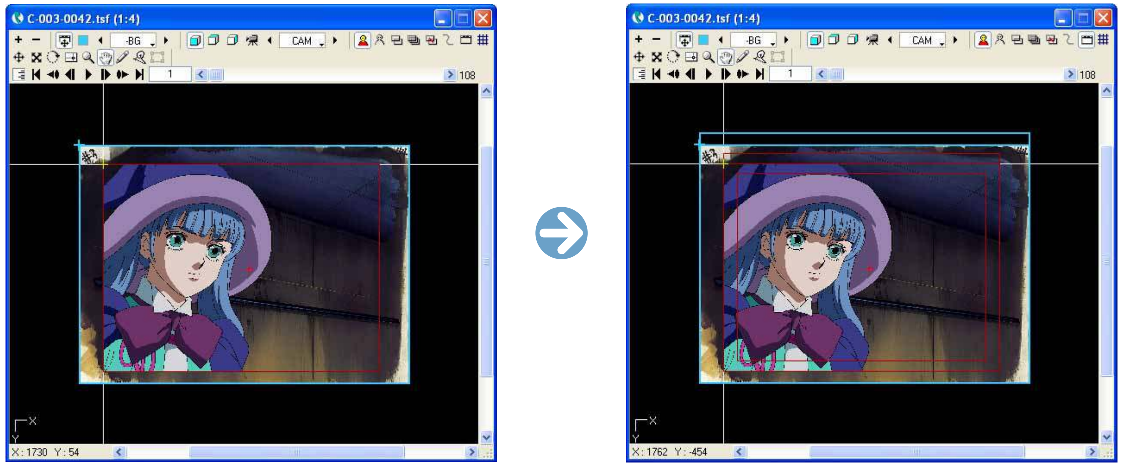


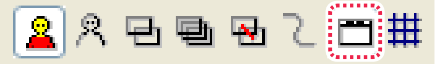


Using the [Hand] tool to drag the image inside the [stage] area, it will possible to scroll the view (When using other tools, pressing the [Ctrl] key will also change the tool function to be the same as the [Hand] tool).

Showing the pegbar on the stage

It is possible to show the pegbar outline in the [Stage] Area of the [Stage] window.

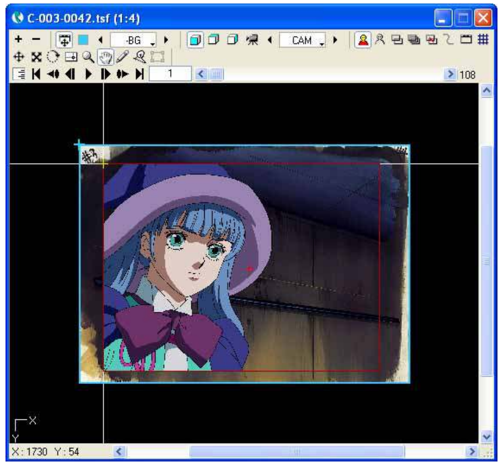


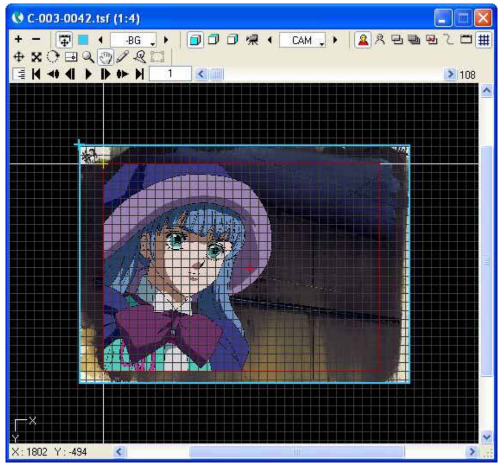


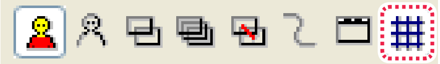
If the [Show Pegbar] command of the [Stage] menu or the [Show Pegbar] button in the [Stage] window is on, the outline of the current pegbar or current layer will be shown to indicate the orientation.

Showing grid lines on the stage

It is possible to show grid lines in the [Stage] area of the [Stage] window.


C-003-0042.tsf (1:4)
BG
CAM
108
X: 1730 Y: 54


C-003-0042.tsf (1:4)
BG
CAM
108
X: 1802 Y: -494

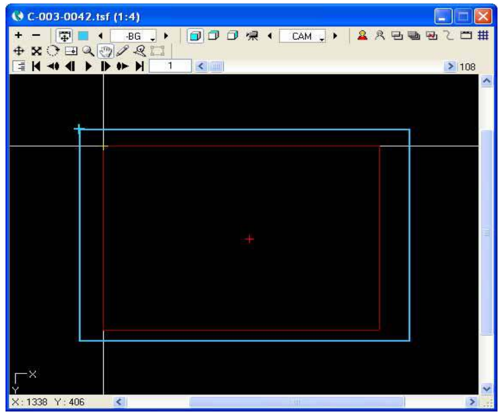


If the [Show Grid] command of the [Stage] menu or the [Show Grid] button in the [Stage] window is on, grid lines will be shown in the [Stage] Area.

Setting the stage to basic view

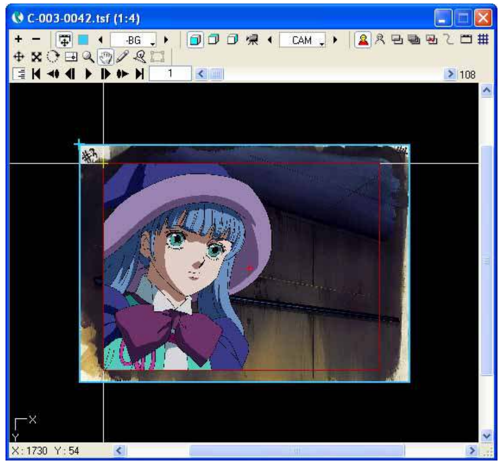
The [Basic View] command in the [Stage] menu is a command that returns the stage view condition to the default conditions.

The outline of the image of the current frame arranged in the stage area is shown as a colored rectangle. None of the other information will be shown. Although it will not be possible to confirm the image content, viewing can be carried out at high speed and will be appropriate for roughly understanding the positioning relationships.

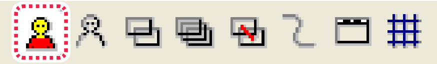

C-003-0042.tsf (1:4)
BG
CAM
108
X: 1338 Y: 406

Showing the image on the stage

It is possible to show the layer image in the [Stage] area of the [Stage] window.

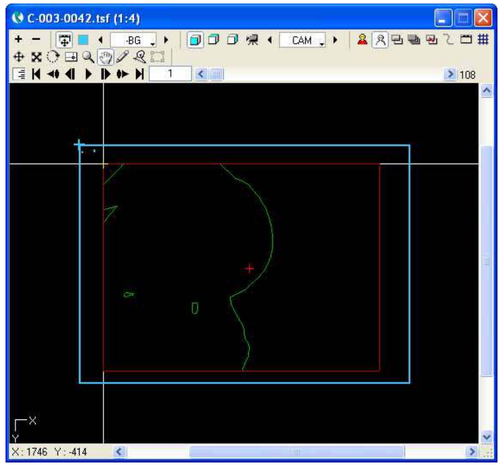

C-003-0042.tsf (1:4)
BG
CAM
108
X: 1730 Y: 54

If the [Image] command of the [Stage] menu or the [Image] button in the [Stage] window is on, the images loaded in each layer will be shown in the [Stage] window.

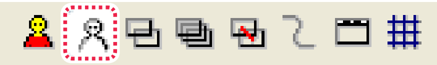


Showing the image outline on the stage

It is possible to show the layer image outline in the [Stage] area of the [Stage] window.


C-003-0042.tsf (1:4)
BG
CAM
108
X: 1746 Y: -414

If the [Outline] command of the [Stage] menu or the [Outline] button in the [Stage] window is on, outlines of the images loaded in each layer will be shown in the [Stage] window.



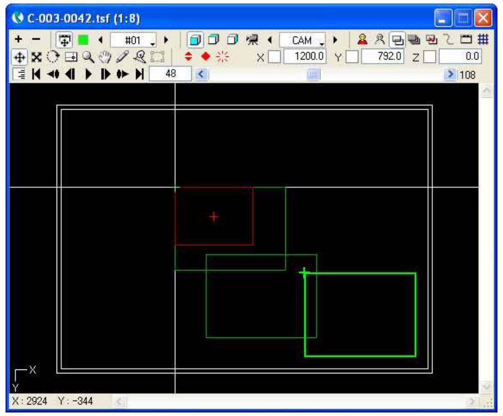
POINT

When the Images are in X-sheet or PSD format

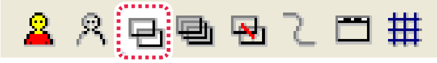
When the images loaded in the layers are in X-sheet or PSD formats, the outlines will not be shown.

Showing all key frames on the stage

It is possible to show all the key frames in the [Stage] area of the [Stage] window.

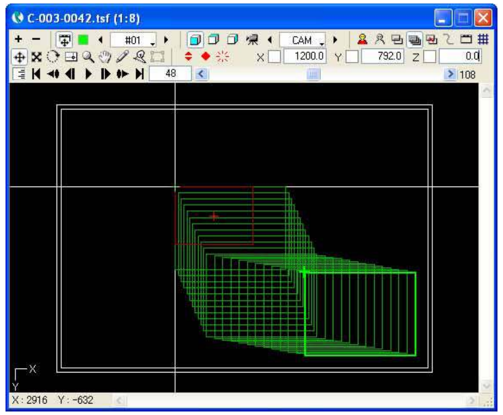


If the [All Key Frames] command of the [Stage] menu or the [All Key Frames] button in the [Stage] window is on, all the key frames of the current pegbar or layer will be shown in the [Stage] window.
The [All Key Frames] command has the following sub-command that allows confirmation only of the necessary key frames on the stage.
[Position X], [Position Y], [Position Z], [Scale], [Rotation], and [Center].

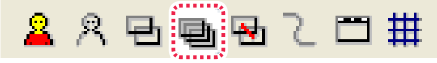


Showing all frames on the stage

It is possible to show all the frames in the [Stage] area of the [Stage] window.

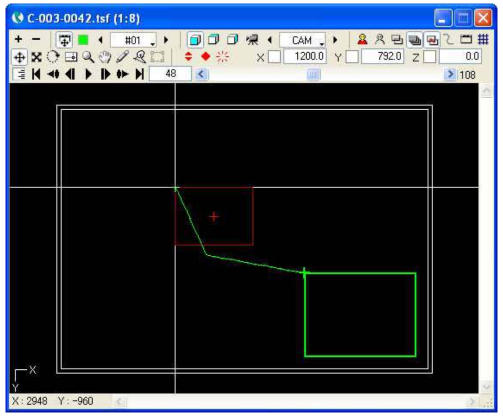


If the [All Frames] command of the [Stage] menu or the [All Frames] button in the [Stage] window is on, all the frames of the current pegbar or layer will be shown in the [Stage] window.

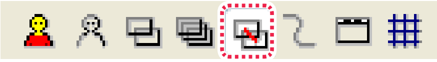


Showing the frame track on the stage

It is possible to show the frame track in the [Stage] area of the [Stage] window.

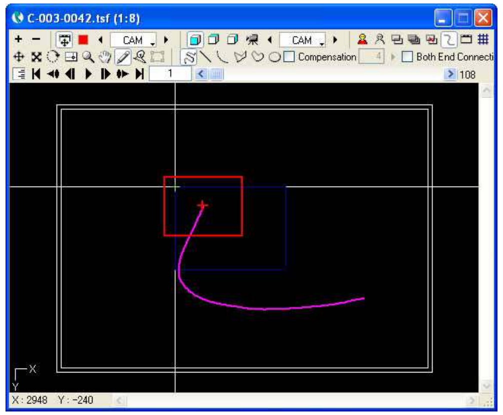


If the [Frame Track] command of the [Stage] menu or the [Frame Track] button in the [Stage] window is on, the frame track of the current pegbar or layer will be shown in the [Stage] window.
The frame track is shown as a line linking the center points of the current pegbar or current layer.



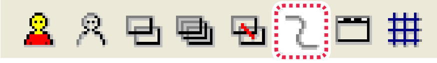
Showing the motion path on the stage

It is possible to show the motion path in the [Stage] area of the [Stage] window.



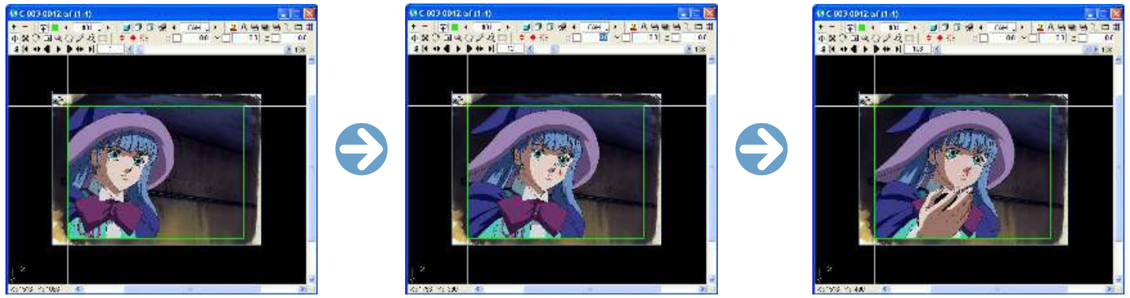
If the [Motion Path] command of the [Stage] menu or the [Motion Path] button in the [Stage] window is on, the track drawn by the path creation tool will be shown in the [Stage] window.

* For more details about motion paths, refer to [Inbetweening] in Chapter 4 [Application Description: Camera Work].



Confirming movement on the stage

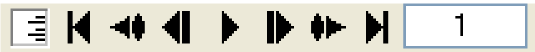
It is possible to show a playback of image and frame movement in the [Stage] area of the [Stage] window.
The speed of the playback will depend on the processing speed of the computer being used. Note that playback will not be conducted at the same speed as that specified in the X-sheet.



Method of using the play and stop commands

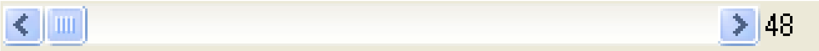
Using the [Play] and [Stop] commands of the [Stage] menu, it will be possible to playback the images on the stage.

Method of Using the Frame Control Panel



Using the frame control panel in the [Stage] window, it will be possible to playback the images on the stage.
* For more details, refer to [Stage Window] in [Window] of Chapter 8 [Reference].

Method of using the frame slider

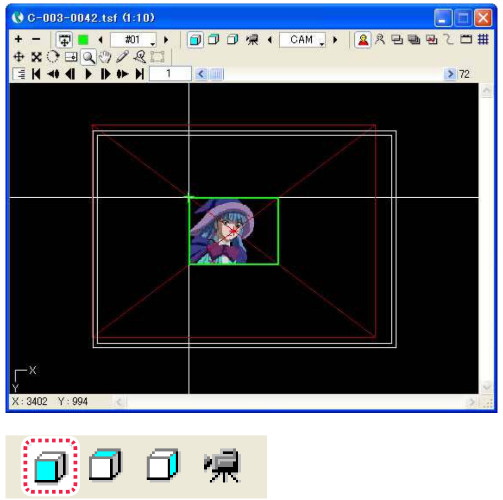


Using the frame slider in the [Stage] window, it will be possible to playback the images on the stage.
* For more details, refer to [Stage Window] in [Window] of Chapter 8 [Reference].

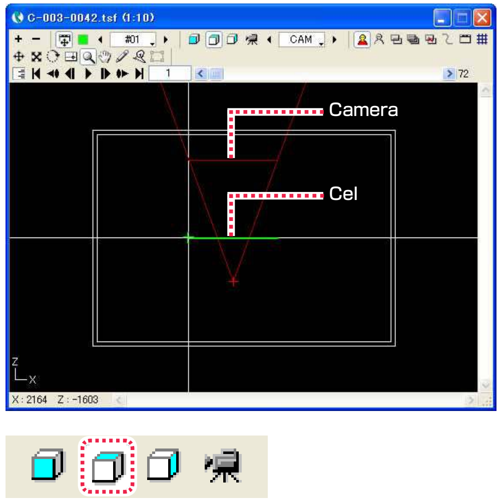
Showing the stage in 3D view

When carrying out 3D camera work, it will be possible to switch the view condition in the stage window [Stage] area to confirm the camera and cel position relationship.

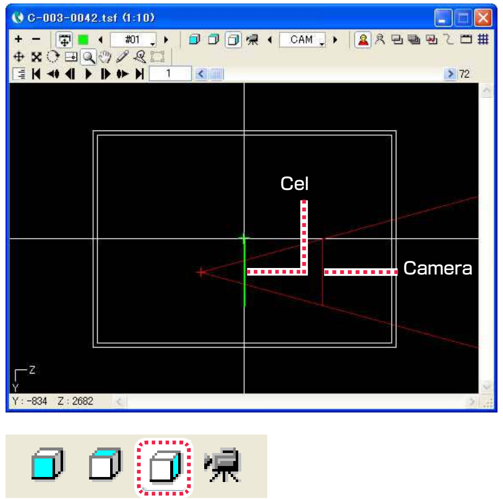
By switching the [View] command in the [Stage] menu, or the 3D camera angle selecting buttons in the [Stage] window, it will be possible to switch between the views on the stage.
* For more details, refer to [Stage Window] in [Window] of Chapter 8 [Reference].



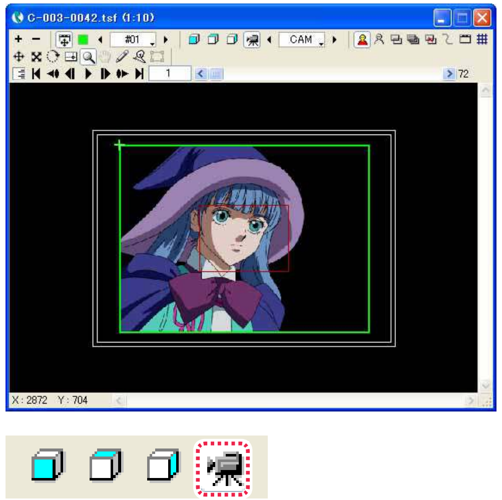
[Front View]



[Top View]



[Side View]



[Camera View]

Chapter

3

Basic description: operation

In this chapter, the basic shooting operations are introduced.

Step:01 Shooting flow 1: FIX (fixed)
Step:02 Shooting flow 2: T.U. (track up)
Step:03 Shooting flow 3: Follow and SL (slide)

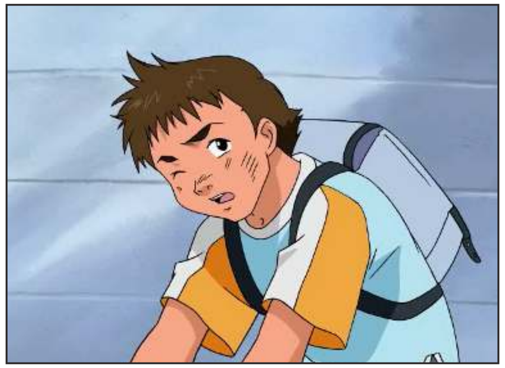
Step: 01 Shooting flow 1: FIX (fixed)

In this step, an explanation is given of the shooting method in CoreRETAS HD [FIX] (Fixed) scenes.

Preparation of materials

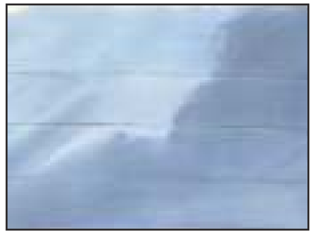
Here we will use the sample data [C-001-0062] to explain the shooting method in a FIX (Fixed) scene (a scene in which the camera does not move).

｢C-001-0062｣

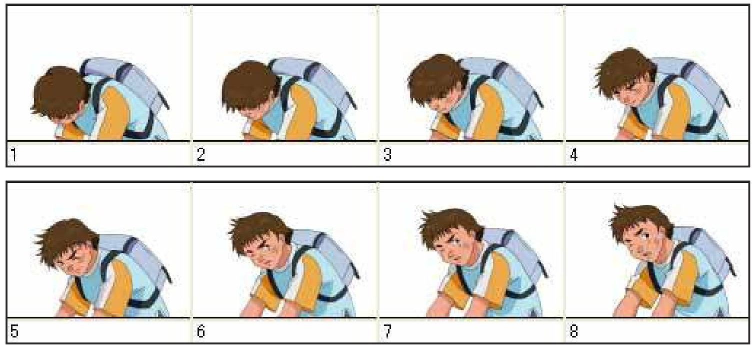


FIX scene shooting image

The sample data incorporates the following images.



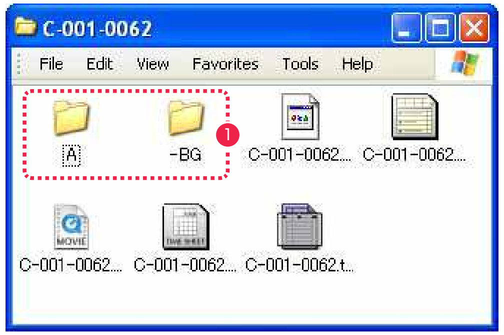
[-BG] Folder [Background] 1 image



[A] Folder [Cels] 8 images

Deleting the X-sheet files

The sample data [C-001-0062] is contained in the [MonoTrace] folder in [SampleData] in the [CoreRETAS HD] folder on the attached [Manual and Sample Data DISC2].


C-001-0062
File
Edit
View
Favorites
Tools
Help
[A]
-BG
①
C-001-0062....
C-001-0062....
C-001-0062....
C-001-0062....
C-001-0062.t...

① To allow study of the flow of the shooting, copy the sample data [C-001-0062] folder to the hard disc of your computer. Then, leaving the folders containing the images ([A] and [-BG]), delete all the other files.

01 Starting up CoreRETAS HD

1. Double-clicking the CoreRETAS HD icon

CoreRETAS
HD 6.1E

Double-click the CoreRETAS HD icon.

2. The splash screen will be shown

RETAS! PRO
REVOLUTIONARY ENGINEERING TOTAL ANIMATION SYSTEM
CORE RETAS HD
HIGH PERFORMANCE COMPOSITING & RENDERING TOOL
CELSYS
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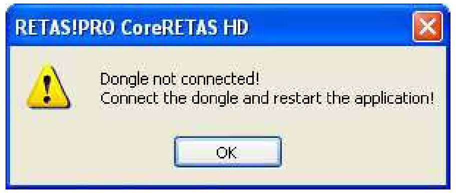
The splash screen will be shown and CoreRETAS HD will start up.

POINT

If an error message appears...

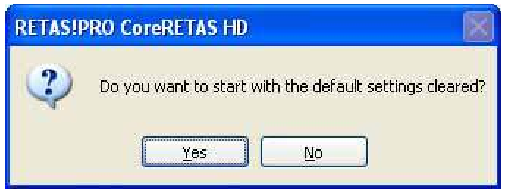
If the error message shown below appears, confirm the connection of the dongle and then restart CoreRETAS HD.


RETAS!PRO CoreRETAS HD

Dongle not connected!
Connect the dongle and restart the application!

To start up in the default condition

When CoreRETAS HD is to be used in the condition it was just after installation, press the [Shift] key immediately after double-clicking the icon to start up the program. When the following dialog box is shown, click the [Yes] button to start up CoreRETAS HD in the condition it was just after installation.

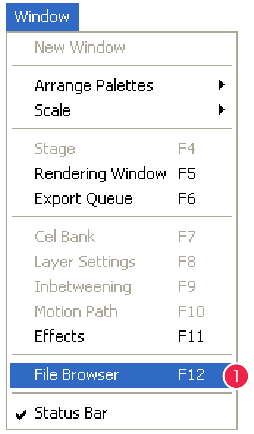

RETAS!PRO CoreRETAS HD

Do you want to start with the default settings cleared?

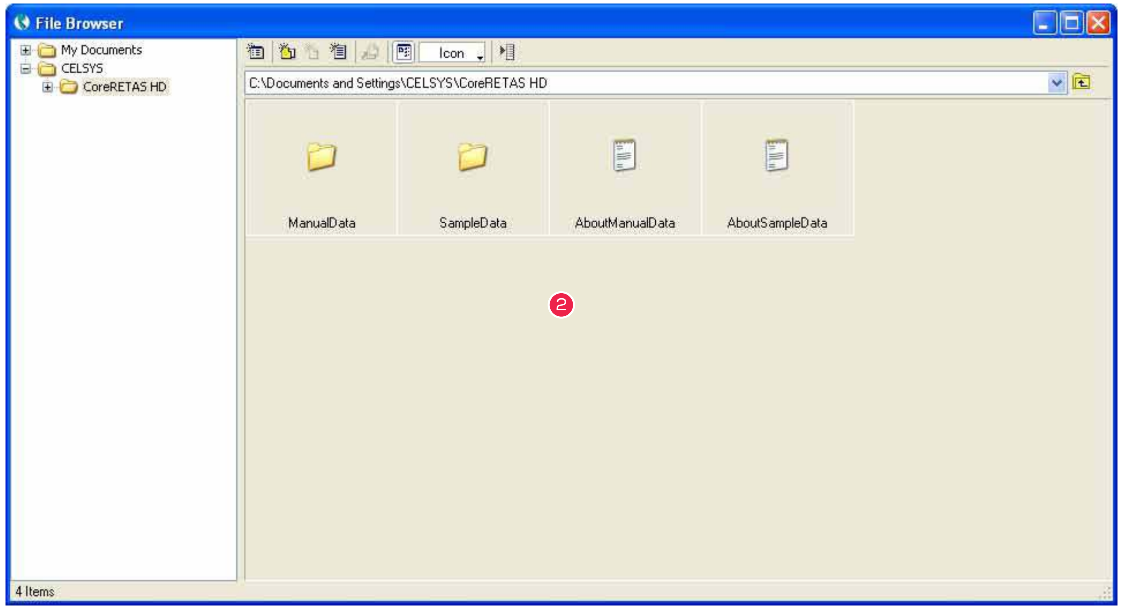
02 Confirming the materials using the file browser

Before carrying out the shooting, confirm the materials contained in the [Scene Folder] using the file browser.

1. Opening the file browser

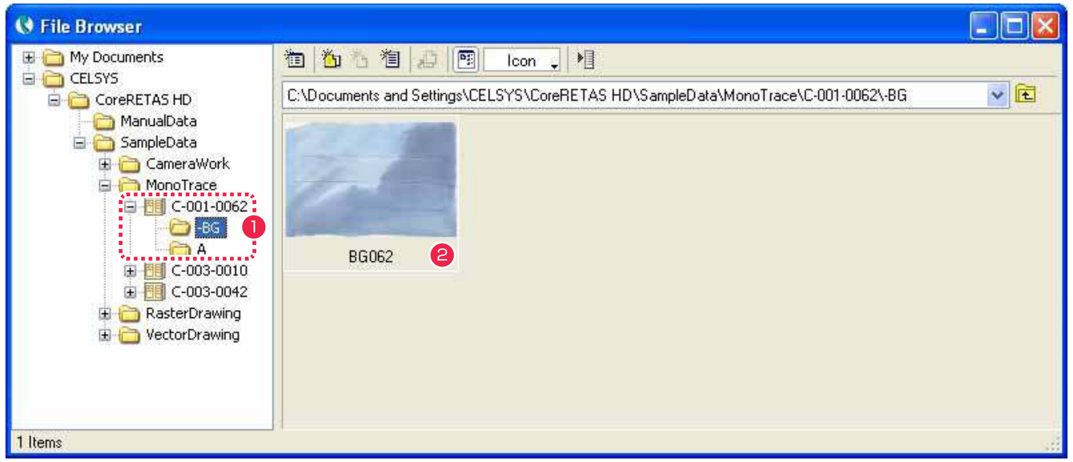

Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
Cel Bank F7
Layer Settings F8
Inbetweening F9
Motion Path F10
Effects F11
File Browser F12
①
Status Bar

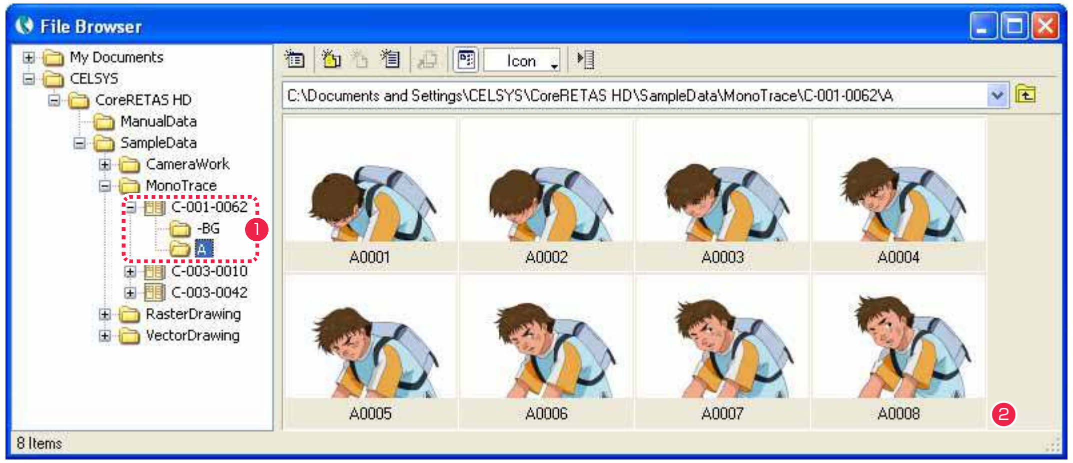
① Select [File Browser] from the [Window] menu.


File Browser
My Documents
CELSYS
CoreRETAS HD
Icon
C:\Documents and Settings\CELSYS\CoreRETAS HD
ManualData
SampleData
AboutManualData
AboutSampleData
②
4 Items

② The [File Browser] will be shown.

2. Confirming the images


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
-BG
A
C-003-0010
C-003-0042
RasterDrawing
VectorDrawing
Icon
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-001-0062\-BG
BG062
①
②
1 Items


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
-BG
A
C-003-0010
C-003-0042
RasterDrawing
VectorDrawing
Icon
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-001-0062\A
A0001
A0002
A0003
A0004
A0005
A0006
A0007
A0008
①
②
8 Items

① Select the [-BG] and [A] folders in the [Scene Folder] containing the [Cels].

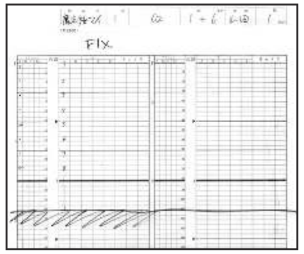
② The [Cels] that have been painted will be shown as thumbnail images. Confirm whether the material images are all included in the [Scene Folder].

Concerning whether or not there is an X-sheet

The work procedure from this point on will differ according to whether or not there is an X-sheet file, and the type of file.
After reading the following explanation, proceed to the relevant page.

When there is no drawing X-sheet file (*.sxf) or shooting X-sheet file (*.tsf)

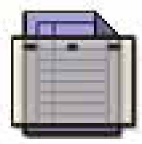
(When there is only an X-sheet that has been written on paper.)



Paper X-sheet

This is the flow introduced in this chapter.
Proceed to the next page.

When a shooting X-sheet file (*.tsf) already exists



(*.tsf)

Skip the procedures of [Creating a shooting X-sheet from a paper X-sheet], [Loading materials to the cel bank], and [X-sheet input 1 (inputting cel numbers to the cel A)], and proceed to [06 X-sheet input 2 (inputting cel numbers to the backgrounds)]

When a drawing X-sheet file (*.sxf) already exists, but there is no shooting X-sheet file (*.tsf)

(*.sxf)

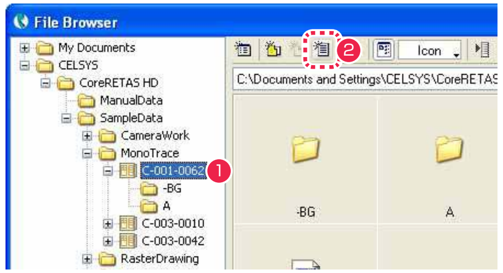
Convert the [Drawing X-sheet] to a [Shooting X-sheet]. For the method of converting a [Drawing X-sheet] to a [Shooting X-sheet], see [Converting a drawing X-sheet to a shooting X-sheet] in Chapter 2 [Understanding the shooting X-sheet].

Then, skip the procedures of [Loading materials to the cel bank] and [X-sheet input 1 (inputting cel numbers to cel A)], and proceed to [06 X-sheet input 2 (inputting cel numbers to the background)]

03 Creating a shooting X-sheet from a paper X-sheet

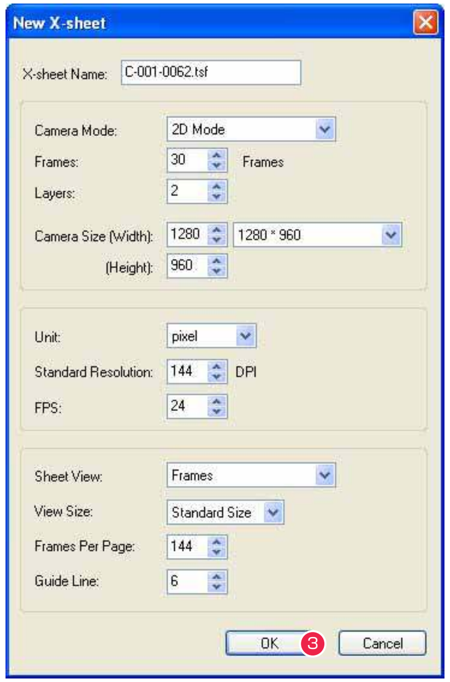
In the situation where neither a [Drawing X-sheet] file (*.sxf) nor a [Shooting X-sheet] file (*.tsf) has been prepared, and there is only a paper X-sheet, first a [Shooting X-sheet File] should be created.

1. Creating a shooting X-sheet file


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
-BG
A
C-003-0010
C-003-0042
RasterDrawing
Icon
C:\Documents and Settings\CELSYS\CoreRETAS
-BG
A
①
②

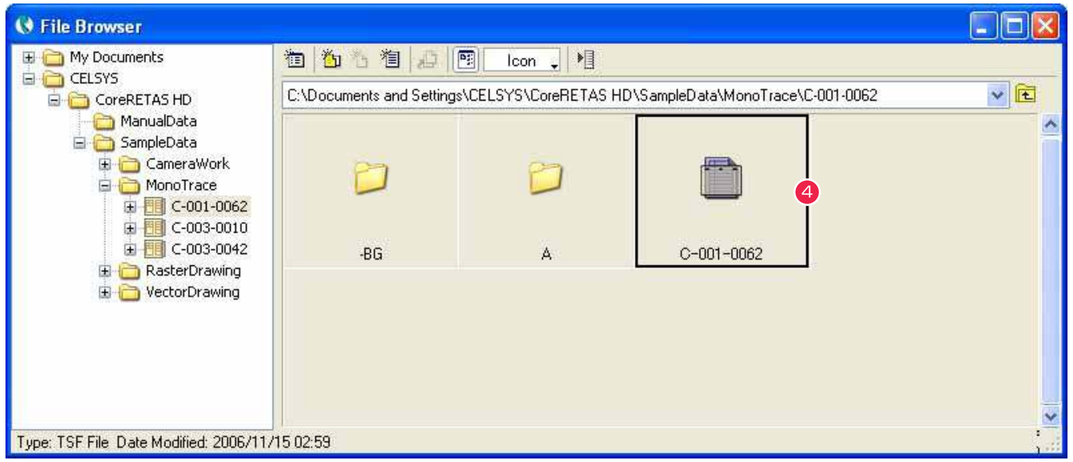
① In the [File Browser], click the scene folder [C-001-0062] in which the new X-sheet file is to be created.

② Click the [New X-sheet...] button on the tool bar to show the [New X-sheet] dialog box.


New X-sheet
OK
Cancel
③

X-sheet Name: C-001-0062.tsf
Camera Mode: 2D Mode
Frames: 30 Frames
Layers: 2
Camera Size (Width): 1280 1280 * 960
(Height): 960
Unit: pixel
Standard Resolution: 144 DPI
FPS: 24
Sheet View: Frames
View Size: Standard Size
Frames Per Page: 144
Guide Line: 6

③ Input the various settings as shown above and then click the [OK] button.


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
C-003-0010
C-003-0042
RasterDrawing
VectorDrawing
Icon
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-001-0062
-BG
A
C-001-0062
④

Type: TSF File Date Modified: 2006/11/15 02:59

④ The [New X-sheet] dialog box will be cleared, and the shooting X-sheet file (*.tsf) will be created inside the selected scene folder.

POINT

Creating an X-sheet using the file browser

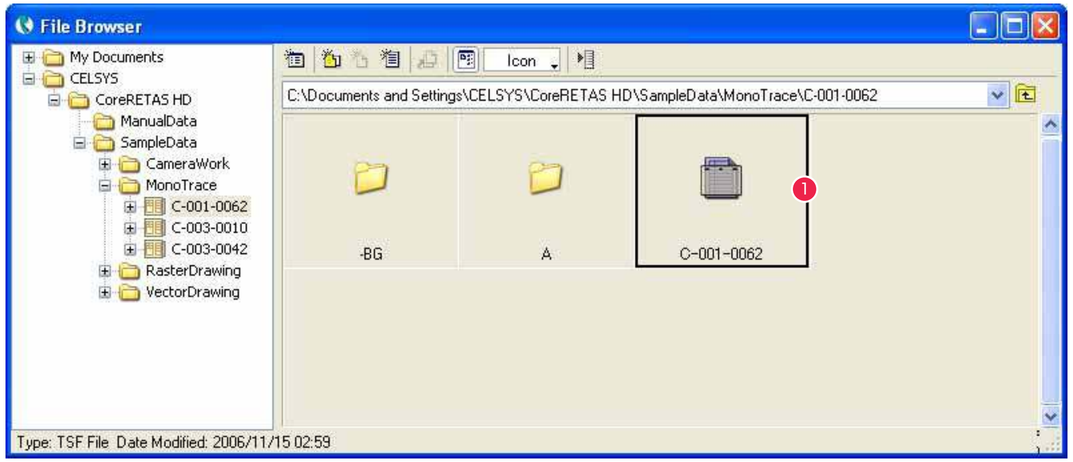
Using the following procedure, it is also possible to create a new X-sheet.

- Select the [New] -> [X-sheet...] command from the [File] menu.
- While pressing the keyboard [Ctrl/Cmd] key, press the [N] key.

However, take care that even though the above methods will display the [X-sheet] window on the screen, the window will not be saved as a file until the [Save] command is executed.

Creating the file using the [File Browser] button will mean that the shooting X-sheet file can be arranged in the target [Scene Folder] from the beginning. Further, it will also be convenient if a management file (*.mng or *.mn6) already exists, since a dialog box will be started up that already has the basic data input such as [Number of Frames] and [Number of Layers] that were set in the [New X-sheet] dialog box.

2. Opening the X-sheet window

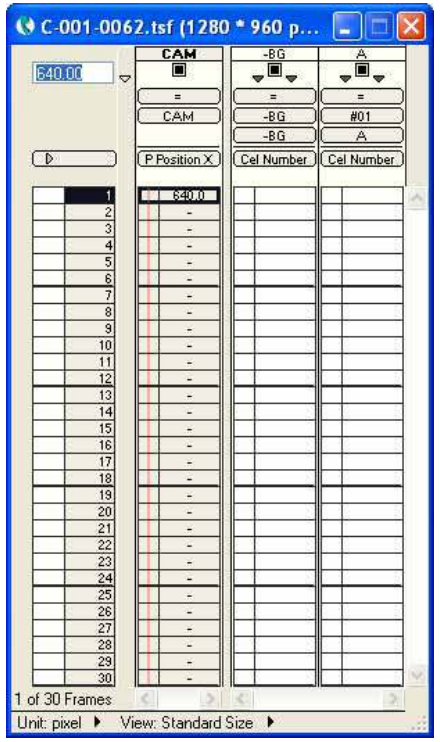

File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
C-003-0010
C-003-0042
RasterDrawing
VectorDrawing
Icon
-BG
A
C-001-0062
1

C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-001-0062

Type: TSF File Date Modified: 2006/11/15 02:59

❶ Double-click the icon of the shooting X-sheet file [C-001-0062.tsf].

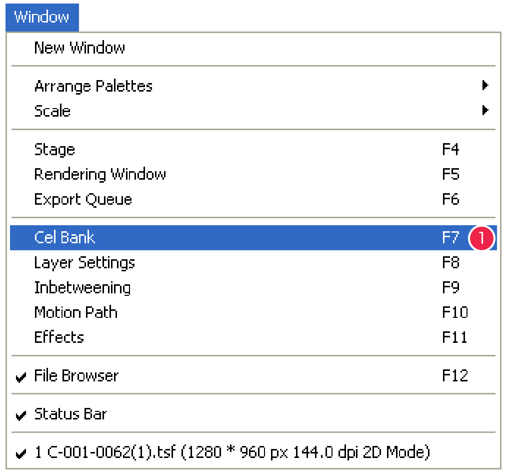
❷ The X-sheet window will be shown.


C-001-0062.tsf (1280 * 960 p...
640.00
CAM
-BG
A
CAM
-BG
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
1 of 30 Frames
Unit: pixel
View: Standard Size

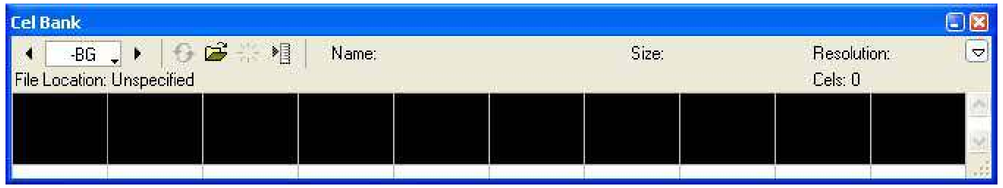
04 Loading materials to the cel banks

This loads cel materials to the cel banks. If the images used in the scene are not loaded to the [Cel Banks], they can not be used as materials.

1. Opening the cel bank


Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
Cel Bank F7
1
Layer Settings F8
Inbetweening F9
Motion Path F10
Effects F11
✓ File Browser F12
✓ Status Bar
✓ 1 C-001-0062(1).tsf (1280 * 960 px 144.0 dpi 2D Mode)

❶ Select [Cel Bank] from the [Window] menu.


Cel Bank
-BG
Name:
Size:
Resolution:
File Location: Unspecified
Cels: 0

❷ The [Cel Bank] palette will be shown.

POINT

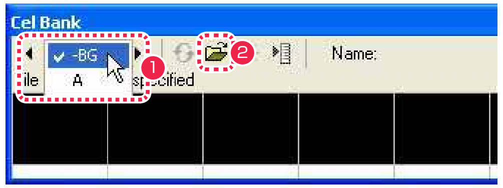
Windows attached to the X-sheet

Since each of these windows cannot be used unless the X-sheet is in the open condition, closing the [X-sheet] window will mean that each of these windows will close at the same time. When the [X-sheet] window is opened afterwards, each of the windows will also be opened in the condition they were in at the time when they were closed.

- [Stage] window
- [Cel Bank] palette
- [Layer Settings] palette
- [Inbetweening] palette
- [Motion Path] palette

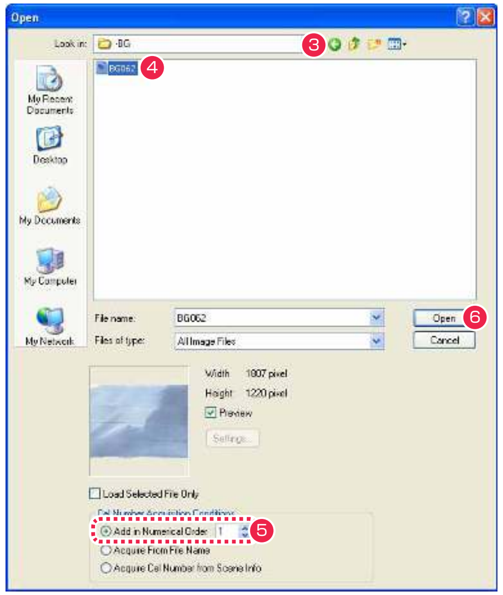
2. Loading the background to the cel bank

Normally, the background image is saved in a folder named [-BG] or [BG]. Background images in the [-BG] folder will be loaded into the same name cel bank [-BG]. Selection of the loading destination is made using the [Select Cel Bank] menu in the [Cel Bank] palette.


Cel Bank
-BG
A
Name:
1
2

① Clicking the [Select Cel Bank] menu will show the pop-up menu. Select cel bank [-BG] as the loading destination. It is also possible to use the left and right buttons to switch the selection destination to make the selection.

② After making the selection, clicking the [Load...] button will show the [Open] dialog box.


Open
Look in: -BG
BG062
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open
Cancel
Preview
Settings...
Load Selected File Only
Add in Numerical Order
Acquire From File Name
Acquire Cel Number from Scene Info
3
4
5
6

File name: BG062

Files of type: All Image Files

Width 1007 pixel

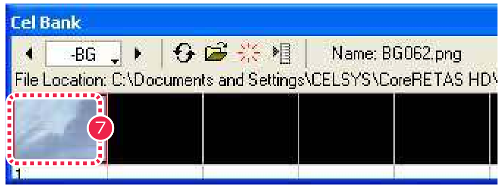
Height 1220 pixel

③ Open the target scene folder and open the [-BG] folder.

④ Select the target background image file [BG062.png].

⑤ Select [Add in Numerical Order].

⑥ Click the [Open] button.


Cel Bank
-BG
1
7

Name: BG062.png

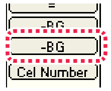
File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\

⑦ The image will be loaded to the [Cel Bank], and information such as the saved location, size, and resolution will be shown.

POINT

Loading to the cel bank from the X-sheet

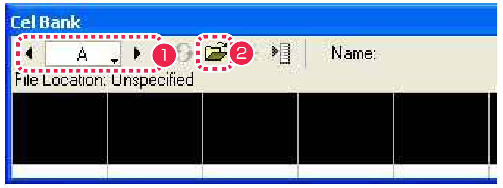
Loading to the [Cel Bank] can also be carried out by clicking the [X-sheet] window [Select Cel Bank] menu while pressing the [Shift] key.


-BG
-BG
Cel Number

+ Shift key

3. Loading the [A] cels to the cel bank

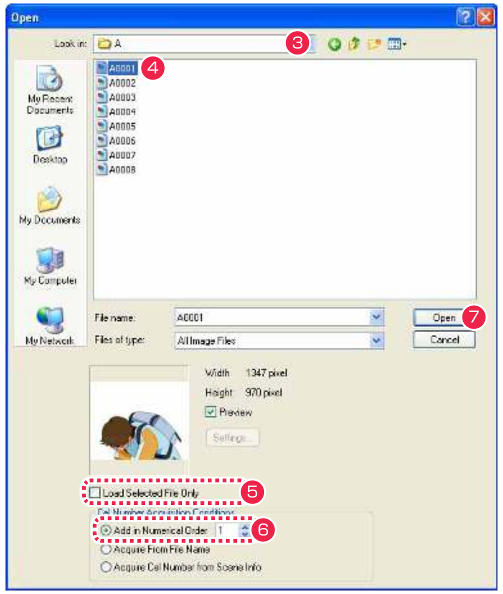
Next, all 8 [Cels] in the [A] folder should be loaded to the cel bank of the same name [A].


Cel Bank
A
Name:
1
2

File Location: Unspecified

① Select the load destination cel bank [A] from the [Select Cel Bank] menu.

② Click the [Load...] button to show the [Open] dialog box.


Open
Look in: A
A0001
A0002
A0003
A0004
A0005
A0006
A0007
A0008
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open
Cancel
Preview
Settings...
Load Selected File Only
Add in Numerical Order
Acquire From File Name
Acquire Cel Number from Scene Info
3
4
5
6
7

File name: A0001

Files of type: All Image Files

Width 1347 pixel

Height 970 pixel

③ Open the target scene folder [A].

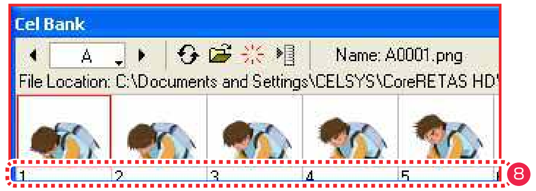
④ Select any one of the files in the [A] cel folder (Ex. A0001.png).

⑤ Confirm that the check box of the [Load Selected File Only] is in the "Off" condition as shown in the figure.

⑥ Select [Add in Numerical Order].

⑦ Click the [Open] button.

Regardless of which file is selected, all of the files in the [A] folder are loaded together into the [Cel Bank].


Cel Bank
A
1
2
3
4
5
8

Name: A0001.png

File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\

⑧ Regardless of which file is selected, all of the files in the [A] folder are loaded together into the [Cel Bank].

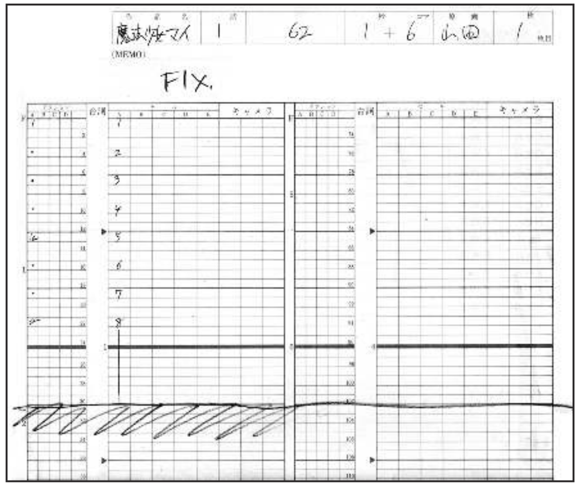
POINT

If only one [Cel] is to be loaded

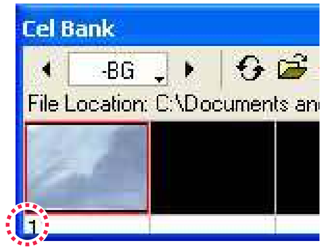
In the [Open] dialog box, if the [Load Selected Files Only] is "On", only the one selected file will be loaded to the cel bank.

05 X-sheet input 1 (inputting cel numbers to the A cel)

Input (X-sheet input) of the [Cel Numbers] to the X-sheet is carried out.
Looking at the paper X-sheet, input the [Cel Numbers] into the [X-sheet] window.



Input each of the values of this paper X-sheet.

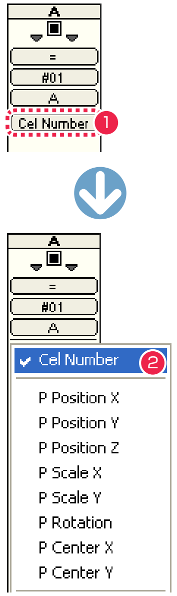

Cel Bank

-BG

File Location: C:\Documents an

The numbers at the image lower left allocated in the [Cel Bank] palette are the [Cel Numbers]. These are input into the X-sheet.

1. Setting the input parameter to cel number


A
=
#01
A
Cel Number
①
A
=
#01
A
Cel Number
②
P Position X
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation
P Center X
P Center Y

① Confirm that the [Input Parameter Setting] menu shows [Cel Number].

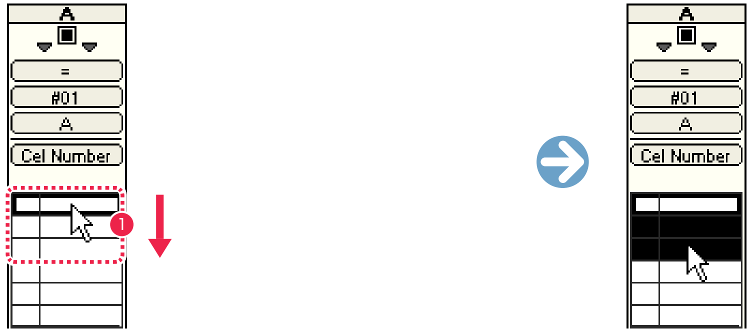
② If the menu shows anything other than [Cel Number], select [Cel Number] from the [Input Parameter Setting] menu.

POINT

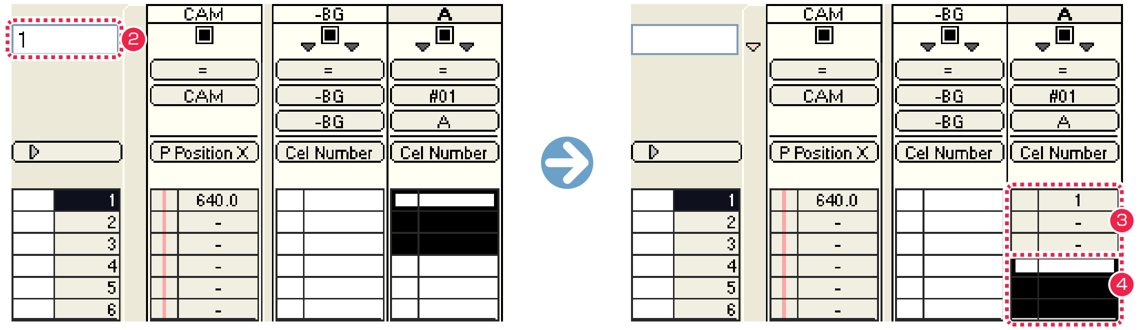
The cel number is only shown in the cel layer

In the [Camera Layer] (CAM), there is no [Cel Number] parameter.

2. Inputting cel numbers in the A cel layer


A
=
#01
A
Cel Number
①

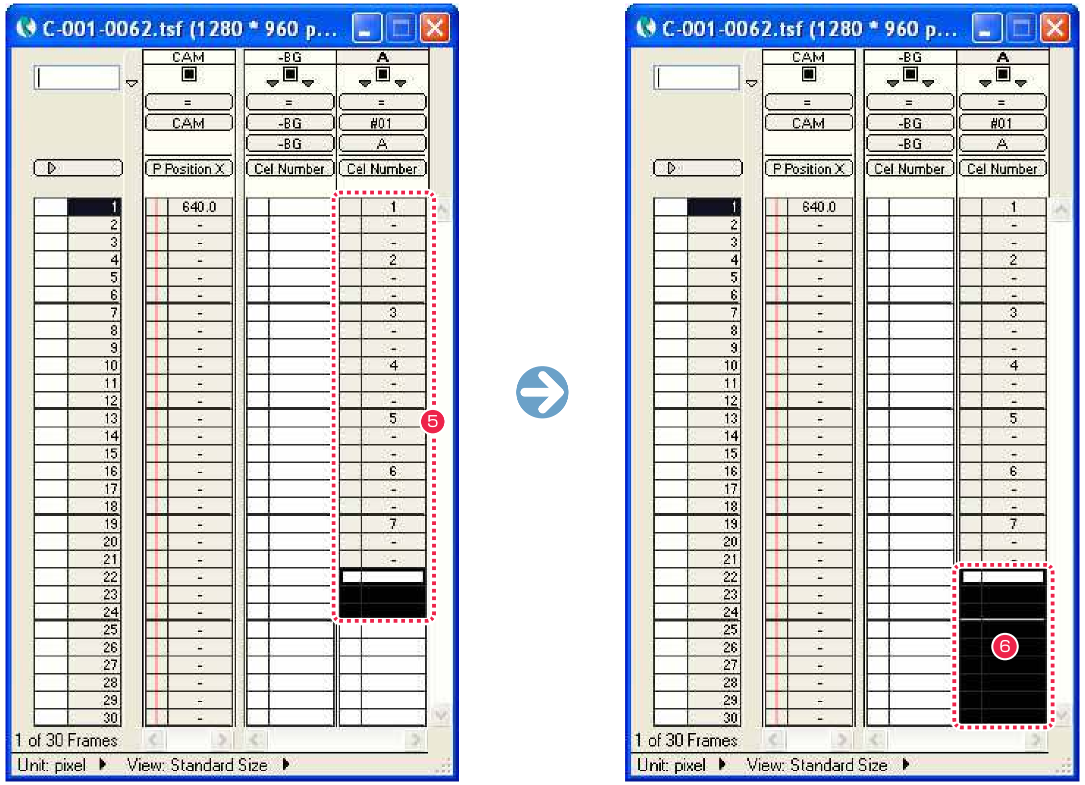
①In order to input cel number [1] to the 1st to 3rd Frames of the [A] cel layer, drag the 1st to 3rd Frames to set them to the selected condition.


1
②
CAM
-BG
A
=
CAM
#01
P Position X
Cel Number
640.0
③
④

②Input the single-byte number [1] in the [Parameter Input] field at the upper left.

③Pressing the [Enter] key will simultaneously input [1] as the [Cel Number] for the selected 3-frame portion.

④When the input is confirmed, the selection range will be automatically shifted down by a three [Data Cell] portion.


C-001-0062.tsf (1280 * 960 p...
CAM
-BG
A
#01
P Position X
Cel Number
640.0
⑤
⑥
1 of 30 Frames
Unit: pixel
View: Standard Size

⑤It will be possible to continue to input the cel numbers in 3-frame units, and the same procedure can be repeated to make 3-frame selections.
Continue to input the [Cel Numbers] as [2], [Enter], [3], [Enter], [4], [Enter], [5], [Enter], [6], [Enter], [7], [Enter] as shown in the figure above.

⑥Only for the last cel number [8], there are 9 frames, so drag between the 22nd and 30th Frames of the cel layer [A] to select the range.

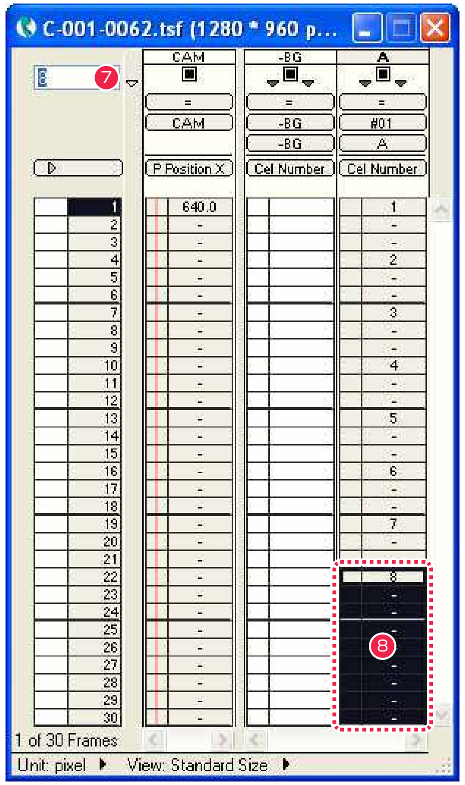
POINT

About the [-] of the data cell

The [-] displayed in the [Data Cell] of the X-sheet is a mark indicating that the same number shown immediately above has been input.

X-sheet input should be carried out using single-byte alphanumeric characters

When inputting the parameters such as [Cel Numbers] in the X-sheet, be sure to use single-byte alphanumeric characters.
Since two-byte numerals can not be used, when inputting [Cel Numbers], be sure to use the [Alphanumeric Input Mode].



C-001-0062.tsf (1280 * 960 p...

	CAM CAM P Position X	-BG -BG -BG Cel Number	A #01 A Cel Number
1	640.0		1
2	-		-
3	-		-
4	-		2
5	-		-
6	-		-
7	-		3
8	-		-
9	-		-
10	-		4
11	-		-
12	-		-
13	-		5
14	-		-
15	-		-
16	-		6
17	-		-
18	-		-
19	-		7
20	-		-
21	-		
22	-		8
23	-		-
24	-		-
25	-		-
26	-		
27	-		-
28	-		-
29	-		-
30	-		-

1 of 30 Frames

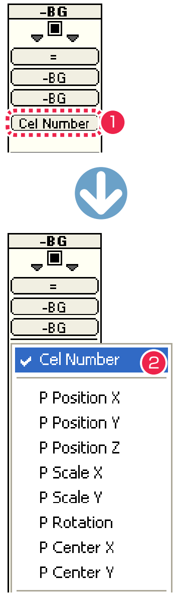
Unit: pixel View: Standard Size

⑦ Input [8] in the [Parameter Input] field.

⑧ By pressing the [Enter] key, the [Cel Number] of [8] will be loaded to the 22nd to 30th Frames.

06 X-sheet input 2 (inputting cel numbers to backgrounds)

1. Setting the input parameter to cel number



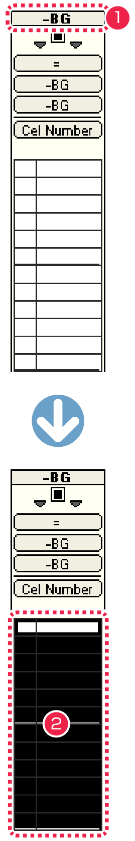
-BG
=
-BG
-BG
Cel Number
①
-BG
=
-BG
-BG
✓ Cel Number
②
P Position X
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation
P Center X
P Center Y

① Confirm that the [Input Parameter Setting] menu of the [-BG] layer [X-sheet] window shows [Cel Number].

② If the menu shows anything other than [Cel Number], select [Cel Number] from the [Input Parameter Setting] menu.

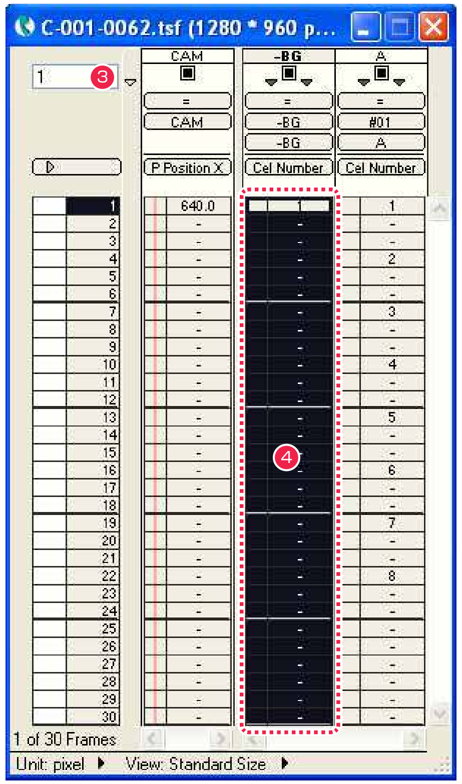
2. Selecting the whole background layer for inputting

Loading the [Cel Number] to each [Data Cell] of the background layer. In this example, since the same background will be used from start to finish, all of the [Data Cells] of the layer should have their [Cel Number] input as [1].


-BG
=
-BG
-BG
Cel Number
①
②

① Double-click the [Title Bar] of the [-BG] (Background Layer).

② All of the [Data Cells] (small cells continuing below) of the [Background Layer] will be selected and shown inversed.


C-001-0062.tsf (1280 * 960 p...
1
③
CAM
-BG
A
=
CAM
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
④
1 of 30 Frames
Unit: pixel
View: Standard Size

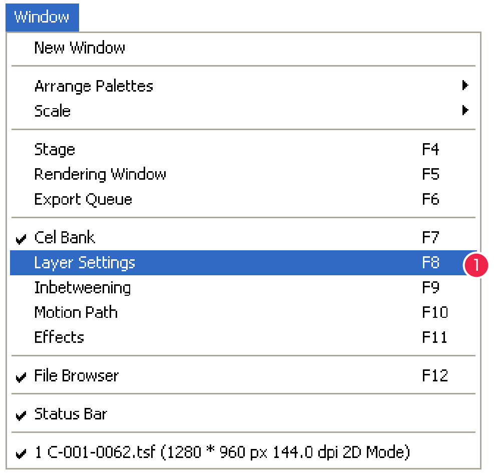
③ Input the single-byte character [1] in the [Parameter Input] Field.

④ Pressing the [Enter] key will load [1] as the [Cel Number] to all the [Data Cells] of the [Background Layer].

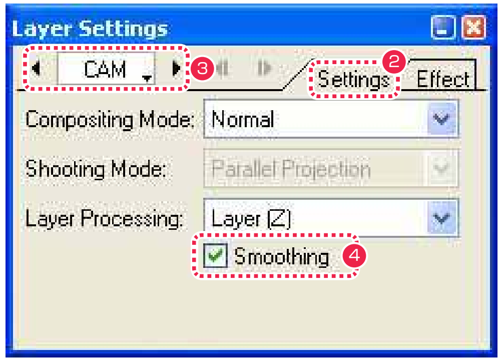
07 Carrying out layer settings

For each layer of the X-sheet, specification of [Smoothing], [Compositing Mode], and [Mask Mode] is made. For a more detailed explanation of [Smoothing], [Compositing Mode], and [Mask Mode], see Chapter 4 [Application Description: Shooting].

1. Setting smoothing to the camera layer


Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
✓ Cel Bank F7
Layer Settings F8
①
Inbetweening F9
Motion Path F10
Effects F11
✓ File Browser F12
✓ Status Bar
✓ 1 C-001-0062.tsf (1280 * 960 px 144.0 dpi 2D Mode)

① Select [Layer Settings] from the [Window] menu to show the [Layer Settings] palette.


Layer Settings
CAM
③
Settings
②
Effect
④

Compositing Mode: Normal

Shooting Mode: Parallel Projection

Layer Processing: Layer (Z)

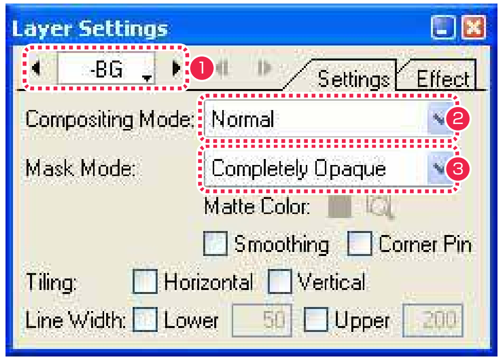
☑ Smoothing

② Click the [Settings] tab.

③ Operate the [Select Layer] menu to select the [CAM] (Camera Layer).

④ Confirm that the check mark is present in the [Smoothing] check box.
Smoothing applies antialiasing to smooth the jagged edges of [Mono Trace] images.

2. Setting the background layer


Layer Settings
-BG
①
Settings
Effect
②
③

Compositing Mode: Normal

Mask Mode: Completely Opaque

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

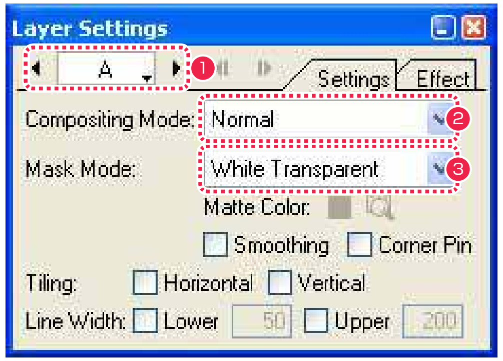
① Operate the [Select Layer] menu to select the [-BG] (Background Layer).

② Confirm that the [Compositing Mode] is set to [Normal].

③ Confirm that the [Mask Mode] is set to [Completely Opaque].

Normally, backgrounds do not include transparent areas, so unless there is a special reason, set [Completely Opaque].

3. Setting the [A] layer


Layer Settings
A
①
Settings
Effect
②
③

Compositing Mode: Normal

Mask Mode: White Transparent

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

① Operate the [Select Layer] menu to select the [A] (Cel Layer).

② Confirm that the [Compositing Mode] is set to [Normal].

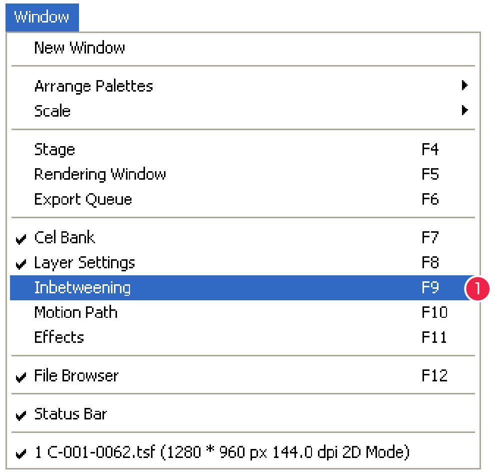
③ As the images are [Mono Trace] images, confirm that the [Mask Mode] is set to [White Transparent].

If [Mono Trace] images are not set to [White Transparent], the transparent areas will not be correctly processed.

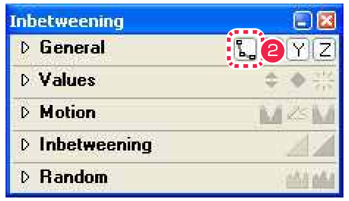
08 Adjusting the position displacement

Even in FIX (Fixed) scenes, it is not always the case that images will be arranged in the correct positions just by reading them in. Accordingly, the rendering position of each layer should be confirmed in the [Stage] window.

1. Setting the auto refresh button to on

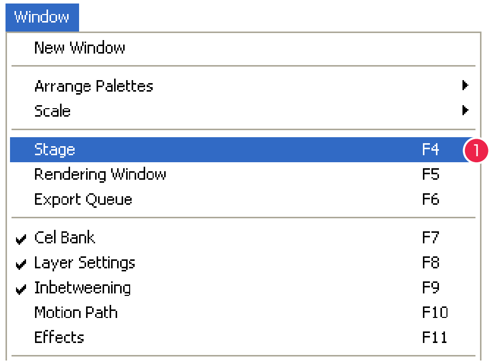

Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
✓ Cel Bank F7
✓ Layer Settings F8
Inbetweening F9
Motion Path F10
Effects F11
✓ File Browser F12
✓ Status Bar
✓ 1 C-001-0062.tsf (1280 * 960 px 144.0 dpi 2D Mode)
①

① Select [Inbetweening] from the [Window] menu to show the [Inbetweening] palette.

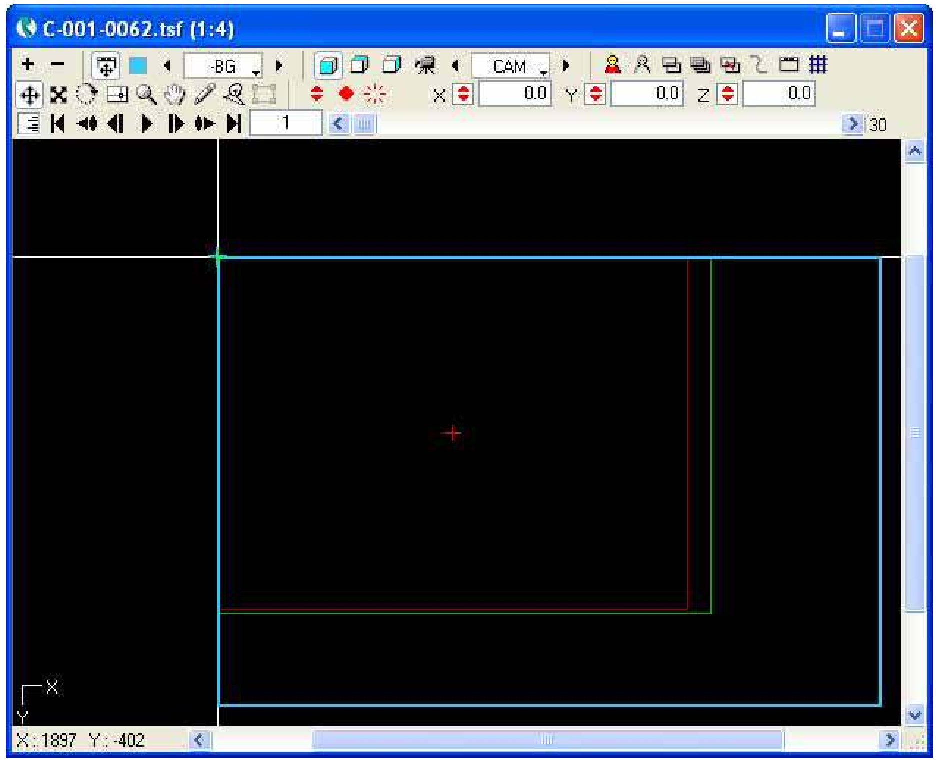

Inbetweening
General
Values
Motion
Inbetweening
Random
②
Y
Z

② Click the [Auto Refresh] button in [General] to set it to the "On" condition as shown in the figure.

2. Opening the stage window


Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
✓ Cel Bank F7
✓ Layer Settings F8
✓ Inbetweening F9
Motion Path F10
Effects F11
①

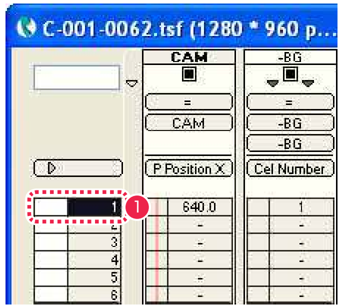
① Select [Stage] from the [Window] menu.


C-001-0062.tsf (1:4)
BG
CAM
X 0.0
Y 0.0
Z 0.0
1
30
X
Y
X : 1897 Y : -402

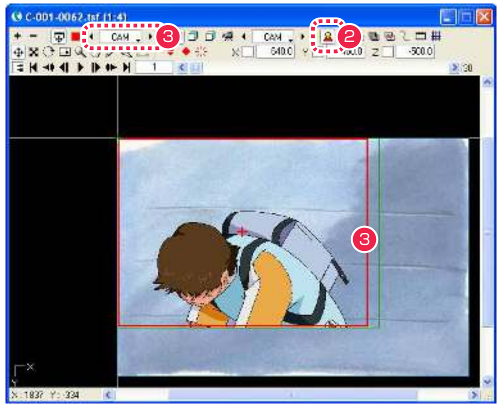
② The [Stage] window will be shown.

3. Confirming the image position

Shows the position of the [Cel] or [Background] in the [Stage] window to allow confirmation.


C-001-0062.tsf (1280 * 960 p...
CAM
-BG
P Position X
Cel Number
640.0
1

① Confirm that the [Current Frame] in the [X-sheet] window is set to [1].


C-001-0062.tsf (1:4)
CAM

② By clicking the [Image] button in the [Stage] window to set it to "On", the [Current Frame] image will be shown in the [Stage] Area.

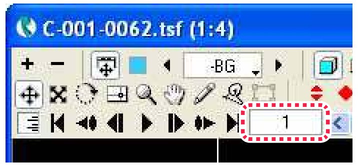
③ Select the [CAM] layer (Camera Layer) from the [Select Pegbar and Layer] menu to confirm the range that will be captured by the camera. The area enclosed by the red border shows the [Range that will be Captured by the Camera].

POINT

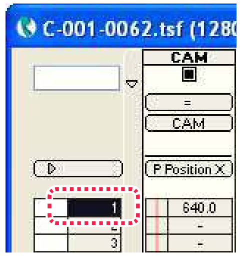
About the current frame

The following frames are known as the [Current Frame]:

- The frame that is currently being edited in the [Stage] window.
- The frame that is currently being rendered in the [Rendering] window.

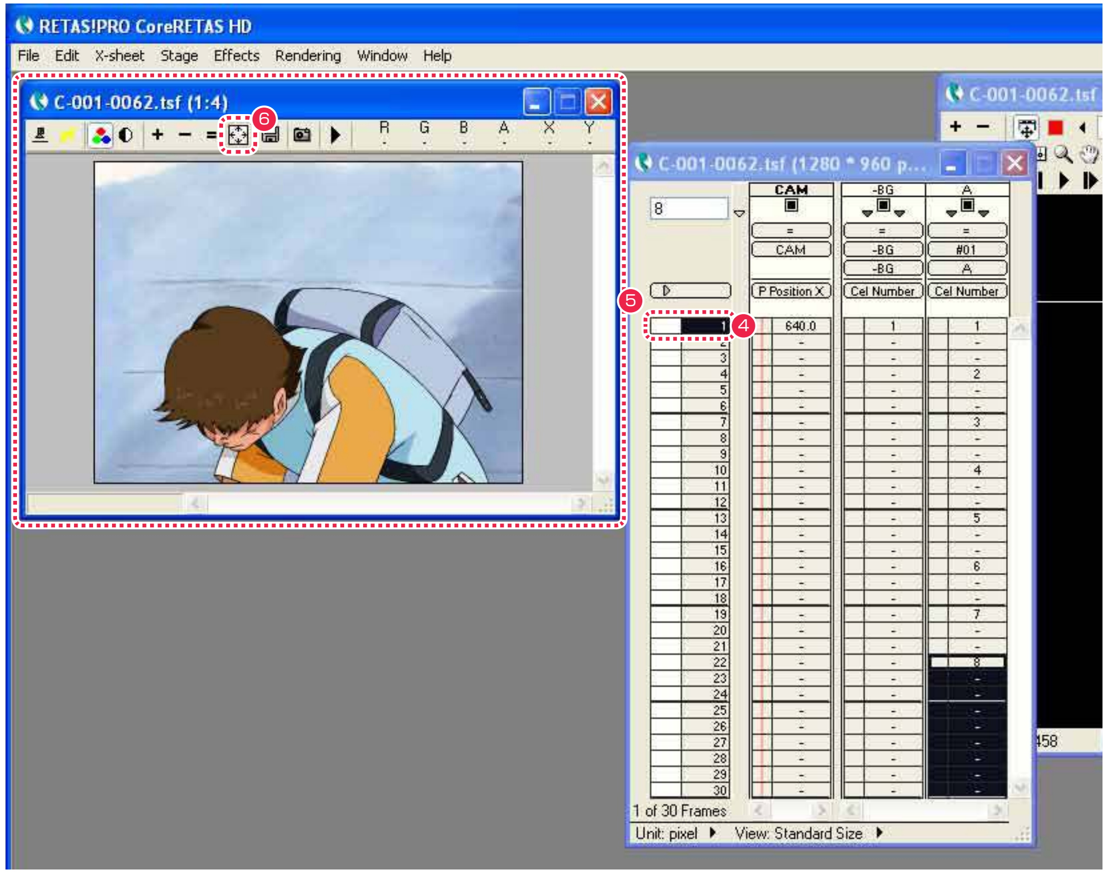

C-001-0062.tsf (1:4)
-BG
1

The [Frame Number View] area in the [X-sheet] window will be shown as inversed black figures.


C-001-0062.tsf (1280
CAM
P Position X
1
640.0

When the image projects outside the [Stage] area

The parts of images that project outside the [Stage] border will not be shown. To show the projecting parts of images, either select [Stage] from the [Preferences] dialog box by selecting [Settings...] -> [Preferences] from the [Edit] menu and widen the [Size] of the [Stage Size], or else shift the [Center] position.


RETAS!PRO CoreRETAS HD
File Edit X-sheet Stage Effects Rendering Window Help
C-001-0062.tsf (1:4)
R G B A X Y
C-001-0062.tsf (1280 * 960 p...
CAM
-BG
A
#01
P Position X
Cel Number
640.0
1 of 30 Frames
Unit: pixel
View: Standard Size

④ Double-click the [Frame Number Display] area in the [X-sheet] window.

⑤ Accompanied by a notification sound, the composited result captured by the camera will be shown in the [Rendering] window.

⑥ By clicking the [All] button in the [Rendering] window, the whole image seen by the camera will be displayed at an increased or reduced size to match the size of the [Rendering] window.

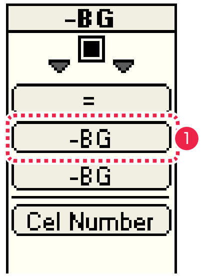
POINT

If the image is not shown in the [Stage] window

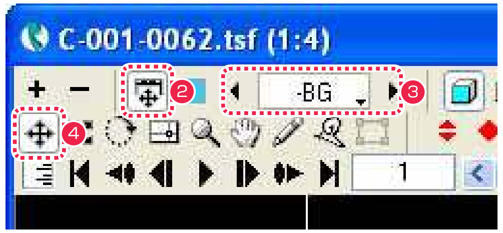
If the image is not shown on the stage even when the [Image] button is set to "On", it is possible either that the [Cel Numbers] have not been loaded in the X-sheet or that [CapsLock] is switched on. If [CapsLock] is shown in the title bar of the [Stage] window, press the [CapsLock] key while pressing down the [Shift] key to release [CapsLock].

4. Adjusting the background position

Immediately after reading in the materials, the position of the background will be displaced, and should be adjusted to the correct position.When moving the [Layer] position, the [Pegbar] that the [Layer] is connected to should be moved.



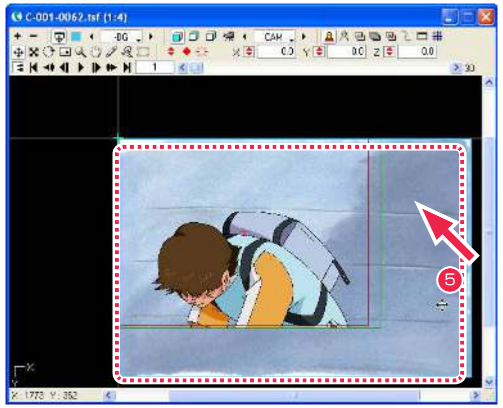
① Confirm that the [-BG] (Background) layer is connected to the [-BG] pegbar.

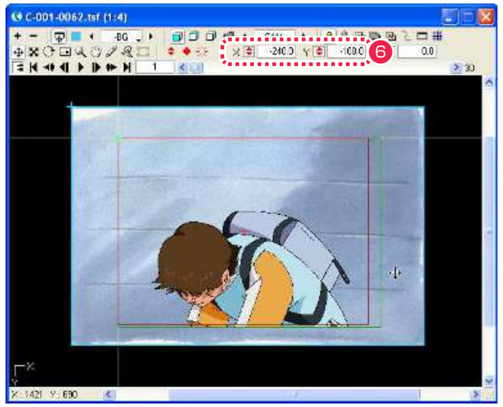


② Confirm that the [Pegbar Edit/Layer Edit] button is in the [Pegbar Edit] condition (The button is in the pressed condition as shown in the figure).

③ Click the [Select Pegbar/Layer] menu of the [Stage] window, and switch the operation target to the [-BG] pegbar.

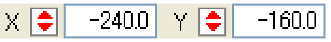
④ Select the [Move] tool.





⑤ Drag the background to adjust its position.

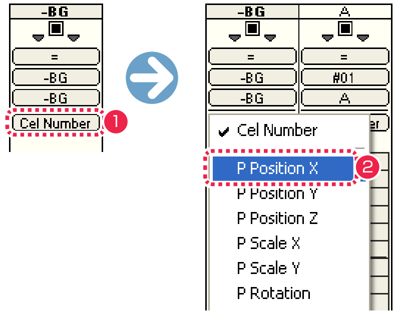
⑥ It is also possible to adjust the position by directly inputting figures in each of the [X] and [Y] fields. In the example, input is made as shown in the figure below.



X -240.0 Y -160.0

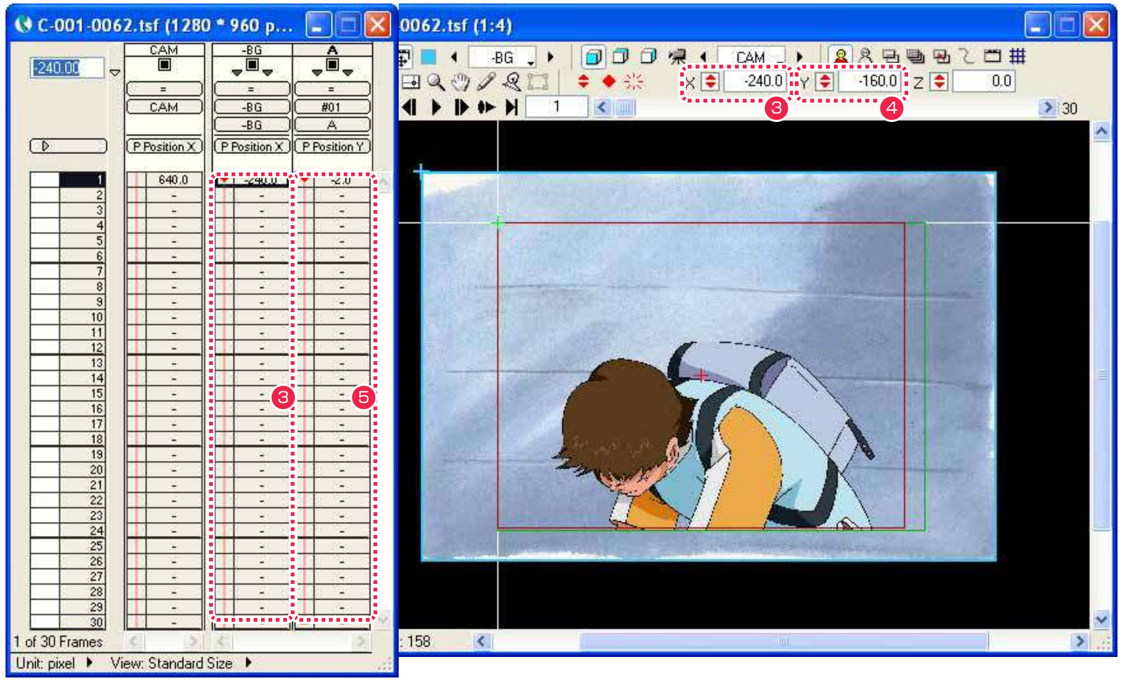
[P Position X] [P Position Y]

5. Confirming the coordinates of a changed layer


-BG
=
-BG
-BG
Cel Number
①
A
#01
✔ Cel Number
P Position X
②
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation

① Click the [Input Parameter Selection] Menu of the [X-sheet] window.

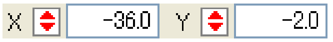
② Select [P Position X] (Pegbar X Position) from the menu.


C-001-0062.tsf (1280 * 960 p...
0062.tsf (1:4)
-240.00
CAM
-BG
#01
A
P Position X
P Position Y
640.0
-240.0
-2.0
X -240.0
Y -160.0
Z 0.0
1
30
③
④
⑤
1 of 30 Frames
Unit: pixel
View: Standard Size
: 158

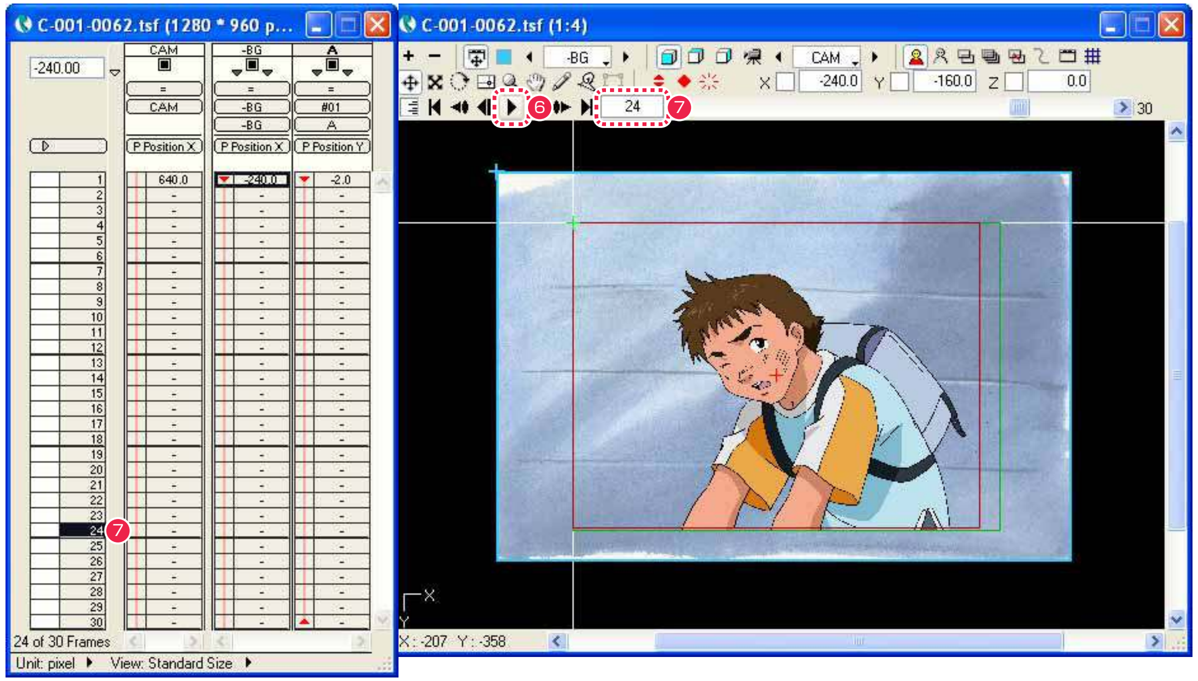
③ Confirm that the same coordinate value as the [X] coordinate ([P Position X]) continues to the last frame of the [-BG Layer].

④ In the same way, select the [Input Parameter Selection] Menu [Y] coordinate ([P Position Y]) and confirm the values.

⑤ Using the same procedure, adjust the A cel (#01 pegbar) position, and confirm that all the frames have been changed to the same values.


X -36.0 Y -2.0

[P Position X] [P Position Y]


C-001-0062.tsf (1280 * 960 p...
C-001-0062.tsf (1:4)
-240.00
CAM
-BG
#01
A
P Position X
P Position Y
640.0
-240.0
-2.0
X -240.0
Y -160.0
Z 0.0
⑥
24
⑦
30
24 of 30 Frames
Unit: pixel
View: Standard Size
X: -207 Y: -358

⑥ By setting the [Play/Stop] button of the [Stage] window to "On", playback will begin on the [Stage], allowing confirmation of the position of each frame(The speed of movement will be different from the actual animation speed).
Clicking the [Play/Stop] button once more will stop the movement.

⑦ Matching the playback in the [Stage] window, the current frame of the X-sheet will also move between each frame.

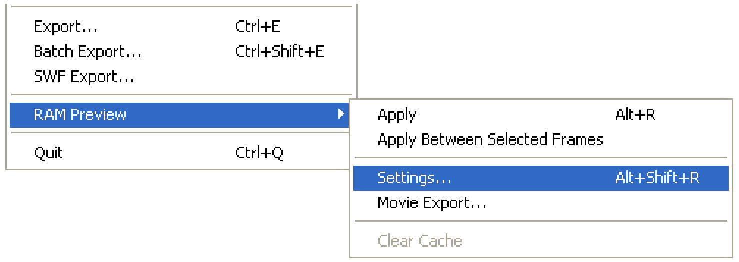
POINT

If the coordinates have not been changed from the 2nd frame onwards

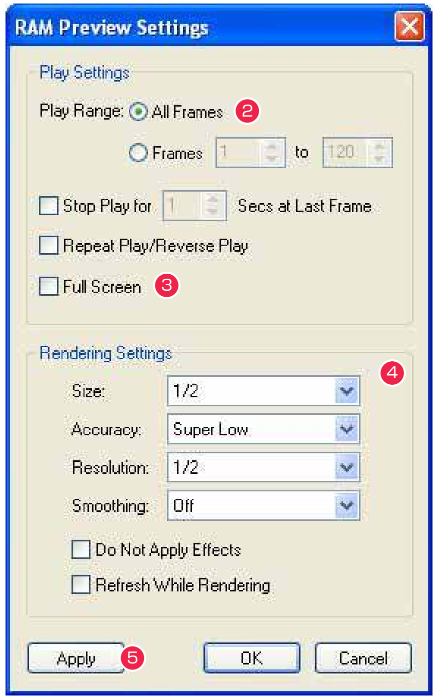
If the coordinates have only been changed for the 1st Frame, so that the 2nd Frame and subsequent frame coordinates remain the same as before, it is possible that the [Auto Refresh] button of the [Inbetweening] palette has not been set to "On".

6. Confirming the movement using RAM preview

When the animation movement is to be confirmed at the correct timing, [RAM Preview] should be used.


Export… Ctrl+E
Batch Export… Ctrl+Shift+E
SWF Export…
RAM Preview
Quit Ctrl+Q
Apply Alt+R
Apply Between Selected Frames
Settings… Alt+Shift+R
Movie Export…
Clear Cache

① By selecting [RAM Preview] -> [Settings...] from the [File] menu, the [RAM Preview Settings] dialog box will be shown.


RAM Preview Settings

Play Settings

Play Range: ● All Frames ②

○ Frames 1 to 120

☐ Stop Play for 1 Secs at Last Frame

☐ Repeat Play/Reverse Play

☐ Full Screen ③

Rendering Settings ④

Size: 1/2

Accuracy: Super Low

Resolution: 1/2

Smoothing: Off

☐ Do Not Apply Effects

☐ Refresh While Rendering

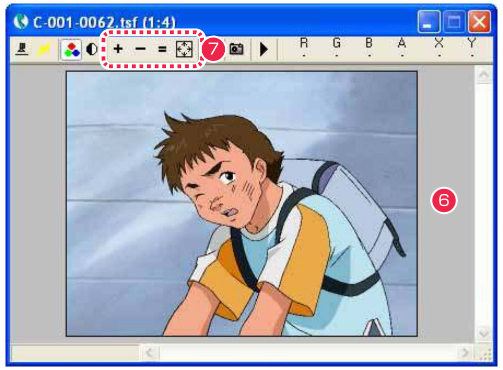
Apply ⑤
OK
Cancel

② Specify the [Play Range].

③ Set the [Full Screen] check box to "Off".

④ Carry out the [Rendering Settings] such as [Accuracy]. When no special setting is required, set the same settings as shown in the image above.

⑤ Click the [Apply] button.


C-001-0062.tsf (1:4)
⑦
R
G
B
A
X
Y
⑥

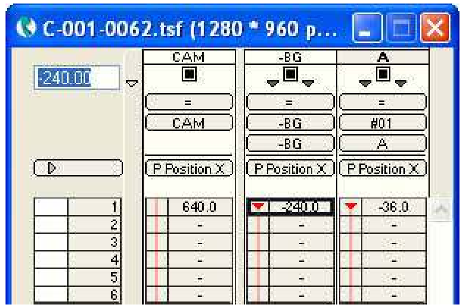
⑥ Looped playback will begin to be shown in the [Rendering] Window. Because rendering will be carried out while the first playback is taking place, the timing will not be correct. However, from the second time playback, the playback timing will be correct according to the settings in the X-sheet.
When the playback is to be stopped, press the [Esc] key.

⑦ To change the size of the displayed animation, adjust using the [Zoom In] button and [Zoom Out] button of the [Rendering] window, then confirm by again selecting [RAM Preview] -> [Apply] from the [File] menu.

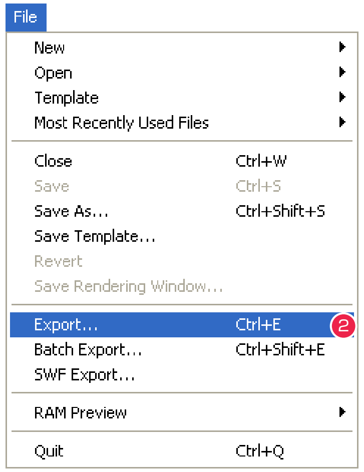
09 Exporting the scene

Exporting the scene that has been shot as a movie or as a series of image files.

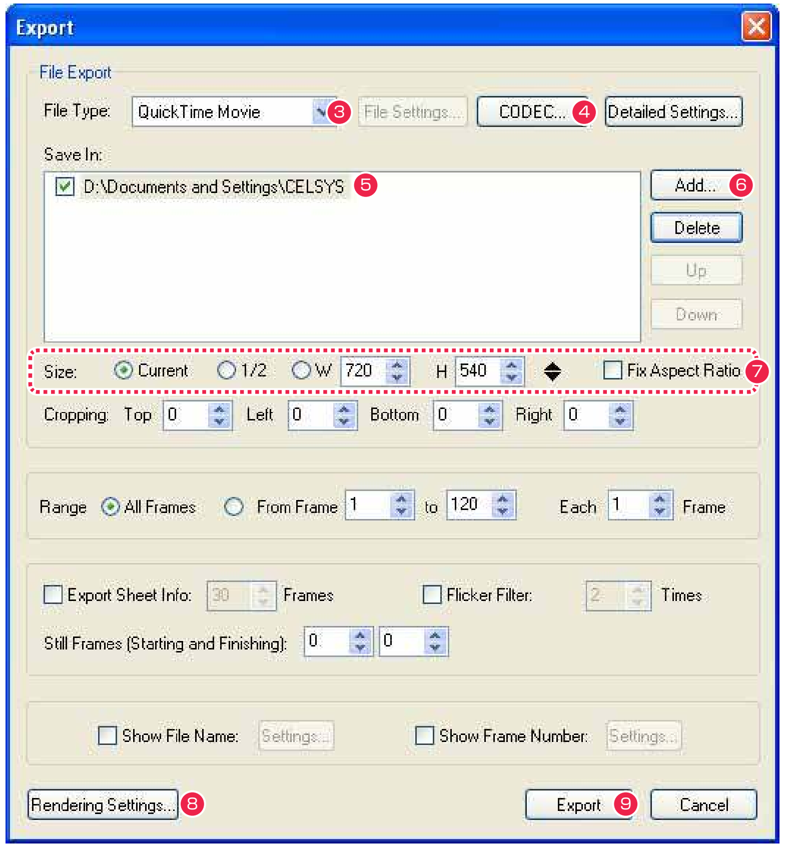
1. Carrying out the export settings


C-001-0062.tsf (1280 * 960 p...
-240.00
CAM
-BG
A
CAM
-BG
-BG
#01
A
P Position X
P Position X
P Position X
640.0
-240.0
-36.0

① Display the [X-sheet] window of the scene that is to be exported at the forefront of the screen.


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Save Template...
Revert
Save Rendering Window...
Export... Ctrl+E ②
Batch Export... Ctrl+Shift+E
SWF Export...
RAM Preview
Quit Ctrl+Q

② Select [Export...] from the [File] menu to show the [Export] dialog box.


Export
File Export
File Settings...
CODEC... ④
Detailed Settings...
Add... ⑥
Delete
Up
Down
Settings...
Settings...
Rendering Settings... ⑧
Export ⑨
Cancel

File Type: QuickTime Movie ③

Save In: ☑ D:\Documents and Settings\CELSYS ⑤

Size: ● Current ○ 1/2 ○ W 720 H 540 ☐ Fix Aspect Ratio ⑦

Cropping: Top 0 Left 0 Bottom 0 Right 0

Range ● All Frames ○ From Frame 1 to 120 Each 1 Frame

☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: ☐ Show Frame Number:

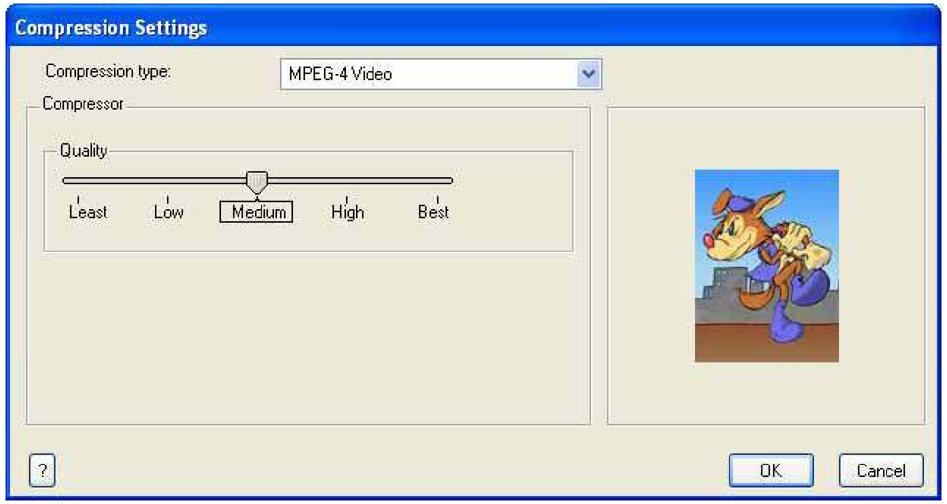
③ Select the image format using [File Type] in the [Export] dialog box(In this example, QuickTime Movie is selected).

POINT

Windows version QuickTime movies

When exporting a Windows version QuickTime movie, it will be necessary for QuickTime to be installed in the computer being used.

④ For the movie format, click the [CODEC...] button and select [Type of Compression] and [Quality] using the [Compression Settings] dialog box(For the CODEC example, [MPEG-4 Video] and Quality [Medium] are selected) .

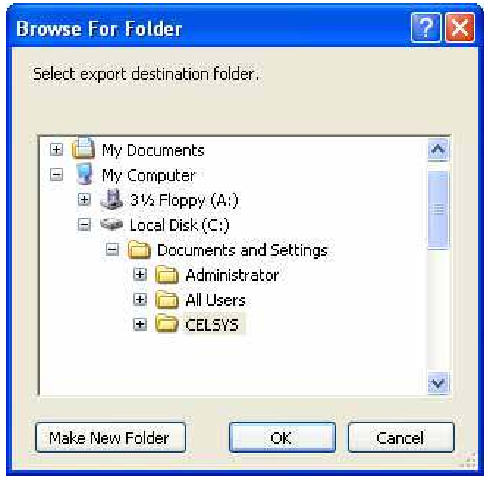

Compression Settings
Compressor
Quality
Least
Low
Medium
High
Best
?
OK
Cancel

Compression type: MPEG-4 Video

Quality: Medium

⑤ Select the [Save In] saving location from the [Export] dialog box. The movie will be created in the uppermost location that has had its check box clicked to switch it on.

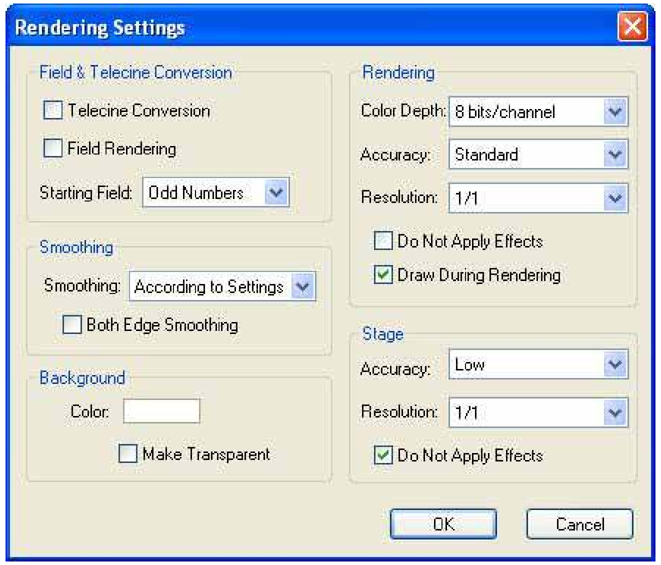
⑥ In the situation where a [Save In] saving location that is not listed is to be newly specified, click the [Add...] button and select the saving location from the [Select Folder] dialog box.


Browse For Folder
My Documents
My Computer
3½ Floppy (A:)
Local Disk (C:)
Documents and Settings
Administrator
All Users
CELSYS
Make New Folder
OK
Cancel

Select export destination folder.

⑦ Select [Size](In this example, [1/2] is selected).

⑧ Click the [Rendering Settings...] button and set the export settings using the [Rendering Settings] dialog box. After finishing the setting, click the [OK] button.


Rendering Settings
Field & Telecine Conversion
Smoothing
Background
Rendering
Stage
OK
Cancel

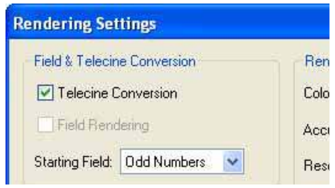
☐ Telecine Conversion
☐ Field Rendering
Starting Field: Odd Numbers
Smoothing: According to Settings
☐ Both Edge Smoothing
Color:
☐ Make Transparent
Color Depth: 8 bits/channel
Accuracy: Standard
Resolution: 1/1
☐ Do Not Apply Effects
☑ Draw During Rendering
Accuracy: Low
Resolution: 1/1
☑ Do Not Apply Effects

⑨ After inputting the various settings, click the [Export] button of the [Export] dialog box to start the exporting. Unless special settings are required, use the same settings as shown on the previous page.

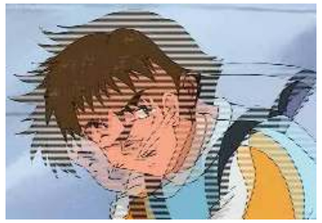
POINT

Use the telecine conversion to change from 24 frames to 30 frames

In the situation where a 24 frame per second setting is to be exported as a 30 frame per second animation, carry out the exporting after switching on the [Telecine Conversion] check mark in [Field & Telecine Conversion] in the [Rendering Settings] dialog box.
When carrying out telecine conversion, some frames may appear to have a [Venetian Blind] effect due to the separation of the odd lines and even lines, but this is normal.

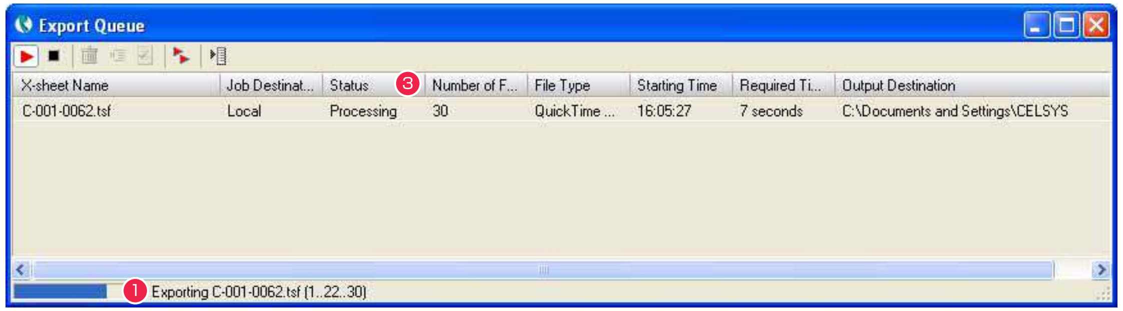

Rendering Settings
Field & Telecine Conversion

☑ Telecine Conversion
☐ Field Rendering
Starting Field: Odd Numbers



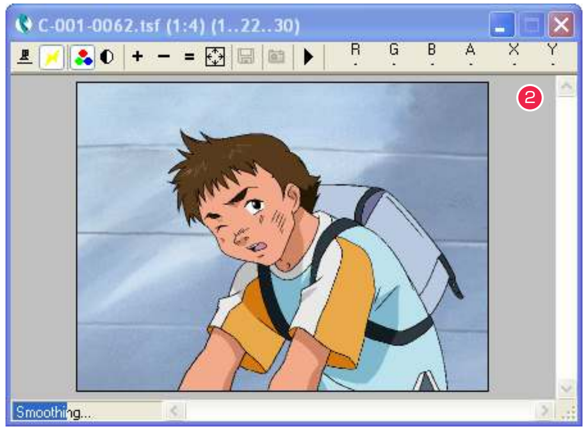
2. Applying the export

When the [Export] button is clicked, CoreRETAS HD begins to export the movie.
The [Export Queue] window is shown, which displays the progress condition.



X-sheet Name	Job Destinat...	Status	Number of F...	File Type	Starting Time	Required Ti...	Output Destination
C-001-0062.tsf	Local	Processing	30	QuickTime ...	16:05:27	7 seconds	C:\Documents and Settings\CELSYS

Exporting C-001-0062.tsf (1..22..30)



① The overall export condition will be shown in the progress bar of the [Export Queue] window.

② Each of the images being exported will be rendered in the [Rendering] window.

③ When the exporting is completed, the notification sound will be heard and the [Condition] column of the [Export Queue] window will change to [Completed].

④ A folder with a name that includes the scene name and export date will be created in the specified location, and the QuickTime movie file will be created inside this.

POINT

When the exporting does not start

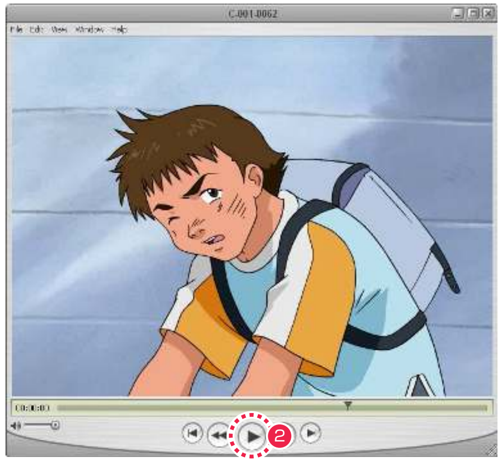
In the situation where the exporting does not start even after clicking the [Export] button, click the [Start] button in the [Export Queue] window.

10 Confirming the finished animation

Viewing the exported QuickTime movie file, confirm the animation.

1. Playing back a QuickTime movie

① By double-clicking the QuickTime movie file icon, the playback application software will start up, and the movie window will open.



② Click the play button to start the movie playing.

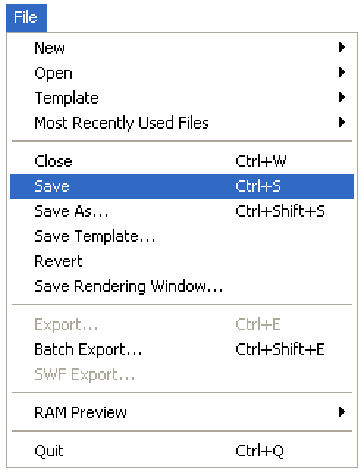
11 Saving the shooting X-sheet

Saving the shooting X-sheet (*.tsf) data of the finished work.

1. Cautions when saving X-sheet files

- Be sure to save the X-sheet file inside the relevant scene folder.
- It is recommended that the X-sheet file name should match the name of the scene folder.
- Confirm whether the X-sheet file name has the extension (.tsf) attached.

2. Saving the X-sheet file


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Save Template...
Revert
Save Rendering Window...
Export... Ctrl+E
Batch Export... Ctrl+Shift+E
SWF Export...
RAM Preview
Quit Ctrl+Q

- By selecting [Save] from the [File] menu, the data will be overwritten on top of the data that was previously saved.

- Selecting [Save As...] will show the [Save As] dialog box to allow setting of the location for saving the file and the X-sheet file name.

POINT

Using X-sheets created by HD with ver.5

In order to use X-sheets that have been created using CoreRETAS HD with CoreRETAS Ver.5 software, it will be necessary to utilize [Save As] to save the X-sheet in Ver.5 format.

12 Quitting CoreRETAS HD

Selecting [Quit] from the [File] menu will quit the CoreRETAS HD program.

Step: 02

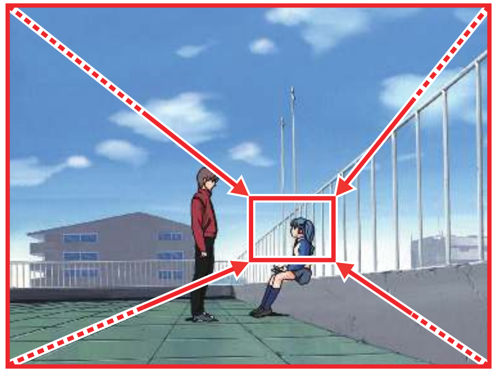
Shooting flow 2: T.U. (track up)

In this step, an explanation is given of the shooting method in [T.U. (Track Up)] scenes.

Preparing the materials

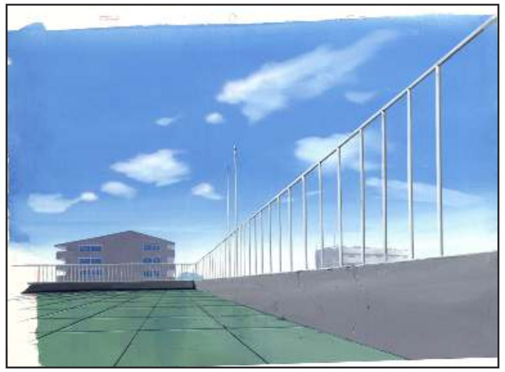
Here we will use the sample data [C-002-0082] to explain the shooting method in a T.U. scene (scene in which the camera appears to close in on a subject).

[C-002-0082]

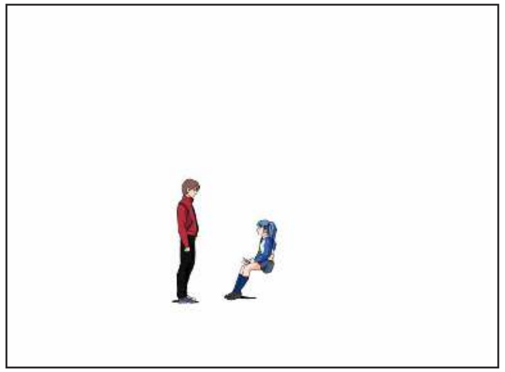


T.U. shooting image

The sample data incorporates the following images.



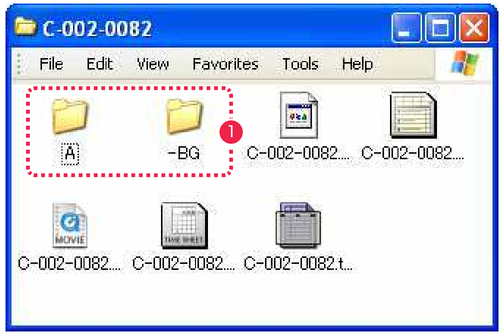
[-BG] Folder [Background] 1 image



[A] Folder [Cel] 1 image

Deleting the X-sheet files

The sample data [C-002-0082] is contained in the [RasterDrawings] folder in [SampleData] in the [CoreRETAS HD] folder on the attached [Manual and Sample Data DISC2].



C-002-0082
File Edit View Favorites Tools Help
A
-BG
❶
C-002-0082...
C-002-0082...
C-002-0082...
C-002-0082...
C-002-0082.t...

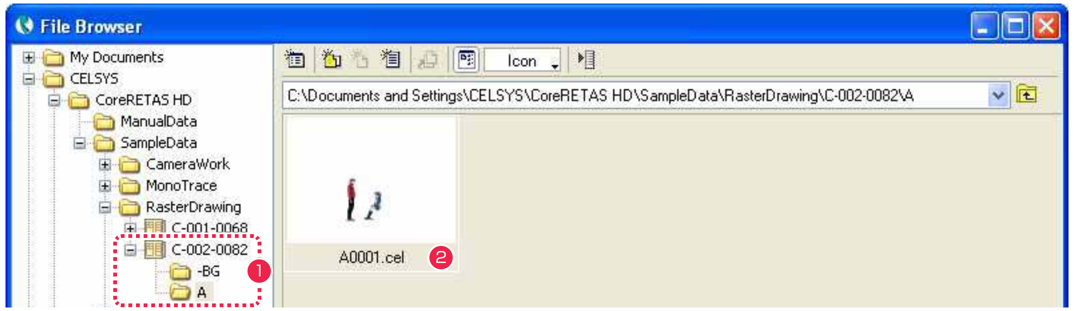
❶ To allow study of the flow of the shooting, copy the sample data [C-002-0082] folder to the hard disc of your computer. Then, leaving only the folders containing the images ([A] and [-BG]), delete all the other files.

01 Confirming the materials using the file browser

Start up CoreRETAS HD, and confirm the materials contained in the [Scene Folder] using the file browser.

1. Opening the file browser

Select [File Browser] from the [Window] menu to show the [File Browser].



File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
C-002-0082
-BG
A
❶
Icon
A0001.cel
❷

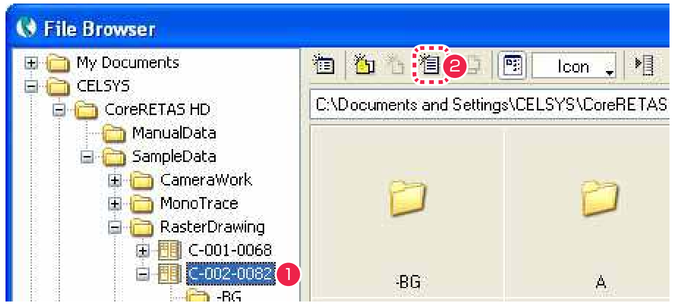
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\RasterDrawing\C-002-0082\A

❶ Select each of the folders in [C-002-0082].

❷ Confirm that the material images are all included inside the [Scene Folder].

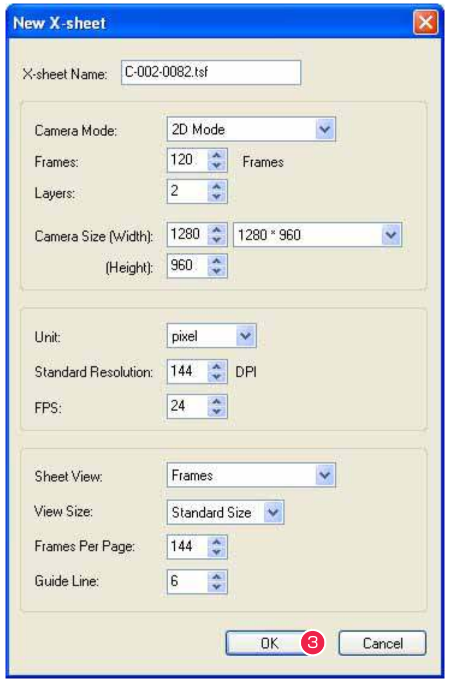
02 Creating a shooting X-sheet from a paper X-sheet

1. Creating an X-sheet file


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
C-002-0082
-BG
Icon
C:\Documents and Settings\CELSYS\CoreRETAS
-BG
A
①
②

❶ Using the [File Browser], select the scene folder [C-002-0082].

❷ Click the [New X-sheet...] button to show the [New X-sheet] dialog box.


New X-sheet

X-sheet Name: C-002-0082.tsf

Camera Mode: 2D Mode

Frames: 120 Frames

Layers: 2

Camera Size (Width): 1280 1280 * 960

(Height): 960

Unit: pixel

Standard Resolution: 144 DPI

FPS: 24

Sheet View: Frames

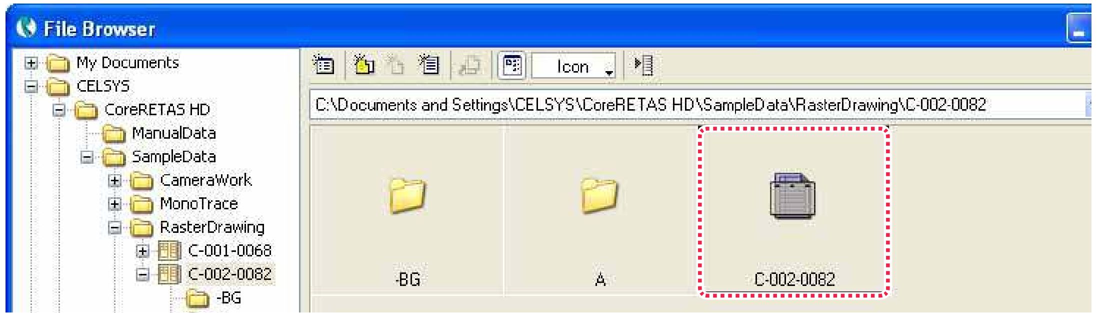
View Size: Standard Size

Frames Per Page: 144

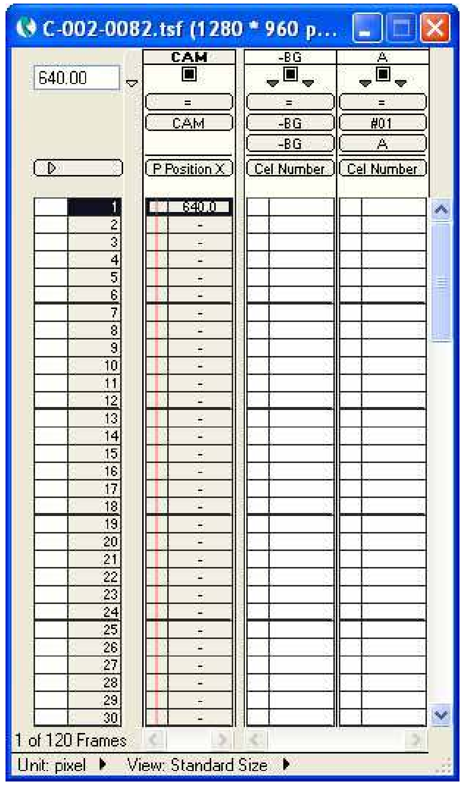
Guide Line: 6

❸ As shown above, input the various settings and then click the [OK] button. The [Shooting X-sheet File] (*.tsf) will be created inside the selected scene folder.

2. Opening the X-sheet window


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
C-002-0082
-BG
Icon
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\RasterDrawing\C-002-0082
-BG
A
C-002-0082

❶ Double-click the icon of the shooting X-sheet file [C-002-0082.tsf] to show the X-sheet window.

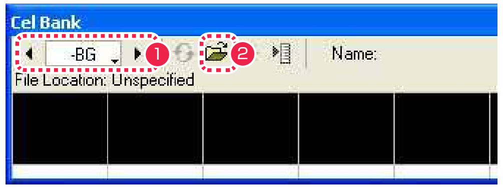

C-002-0082.tsf (1280 * 960 p...
640.00
CAM
-BG
A
=
CAM
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
1 of 120 Frames
Unit: pixel
View: Standard Size

03 Loading the materials in the cel banks

This loads the image materials such as backgrounds and [Cels] in the [Cel Banks].

1. Loading the background to the cel bank

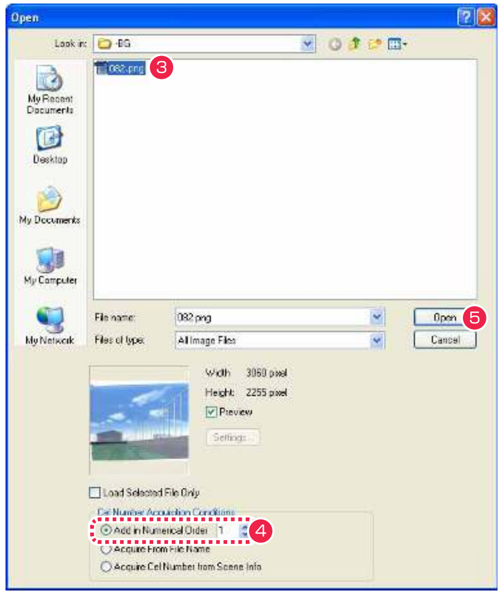
Select [Cel Bank] from the [Window] menu to show the [Cel Bank] palette.


Cel Bank
-BG
①
②
Name:

File Location: Unspecified

① From the [Select Cel Bank] menu, select cel bank [-BG] as the loading destination.

② Click the [Load...] button to show the [Open] dialog box.


Open
Look in: -BG
082.png ③
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open ⑤
Cancel
④

File name: 082.png

Files of type: All Image Files

Width 3060 pixel

Height 2255 pixel

☑ Preview

Settings...

☐ Load Selected File Only

Cel Number Acquisition Conditions

● Add in Numerical Order 1

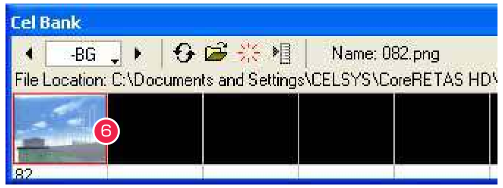
○ Acquire From File Name

○ Acquire Cel Number from Scene Info

③ Select the [-BG] folder image [082.png] in the scene folder [C-002-0082].

④ Select [Add in Numerical Order].

⑤ Click the [Open] button.

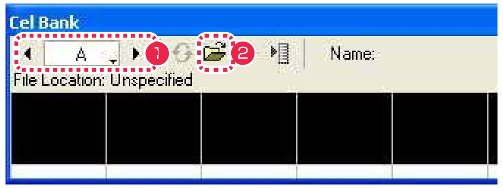

Cel Bank
-BG
⑥
82

Name: 082.png

File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\

⑥ The image will be loaded to the [Cel Bank].

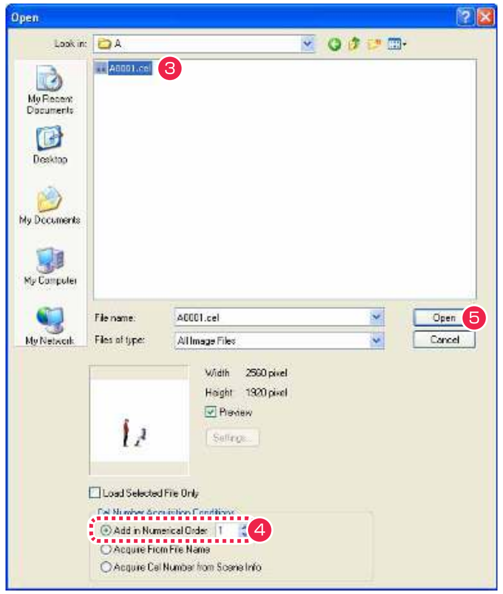
2. Loading the A cel to the cel bank


Cel Bank
A
①
②
Name:

File Location: Unspecified

① Select the load destination [A] from the [Select Cel Bank] menu.

② Click the [Load...] button to show the [Open] dialog box.


Open
Look in: A
A0001.cel ③
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open ⑤
Cancel
④

File name: A0001.cel

Files of type: All Image Files

Width 2560 pixel

Height 1920 pixel

☑ Preview

Settings...

☐ Load Selected File Only

Cel Number Acquisition Conditions

● Add in Numerical Order 1

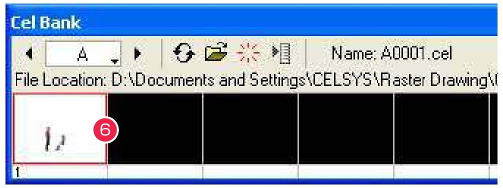
○ Acquire From File Name

○ Acquire Cel Number from Scene Info

③ Select the [A] folder image [A0001.cel] inside the scene folder [C-002-0082].

④ Select [Add in Numerical Order].

⑤ Click the [Open] button.


Cel Bank
A
⑥
1

Name: A0001.cel

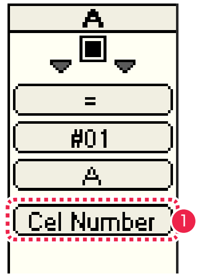
File Location: D:\Documents and Settings\CELSYS\Raster Drawing\

⑥ The image is loaded into the [Cel Bank].

04 X-sheet input 1 (Inputting cel numbers to the A cel)

Looking at the paper X-sheet, input the cel numbers into the [X-sheet] window.

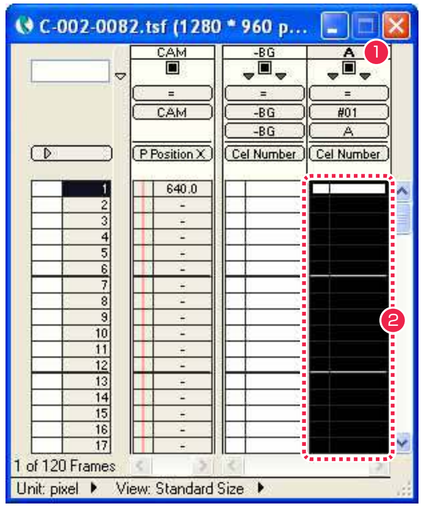
1. Switching to cel number as the input parameter


A
=
#01
A
Cel Number
①

① Switch the display of the [A] layer [Input Parameter Setting] menu to [Cel Number].

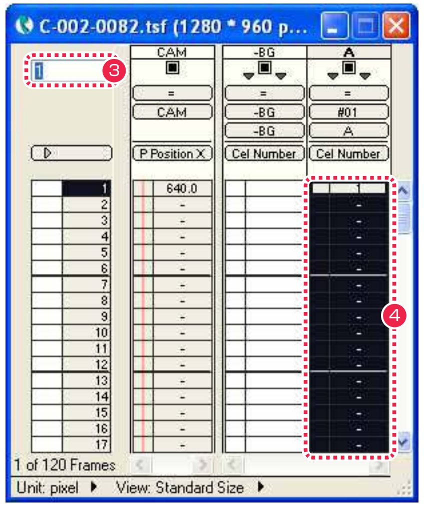
2. Selecting the whole [A] layer for inputting

In this example, since the same image will be used from start to finish in the [A] layer, the whole layer will be selected and the cel number will be input as [1].


C-002-0082.tsf (1280 * 960 p...
CAM
-BG
A
①
CAM
-BG
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
②
1 of 120 Frames
Unit: pixel
View: Standard Size

① Double-click the [Title Bar] of the [A] layer.

② All the [Data Cells] of the [A] layer will be selected and will be shown inversed in black.


C-002-0082.tsf (1280 * 960 p...
1
③
CAM
-BG
A
CAM
-BG
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
④
1 of 120 Frames
Unit: pixel
View: Standard Size

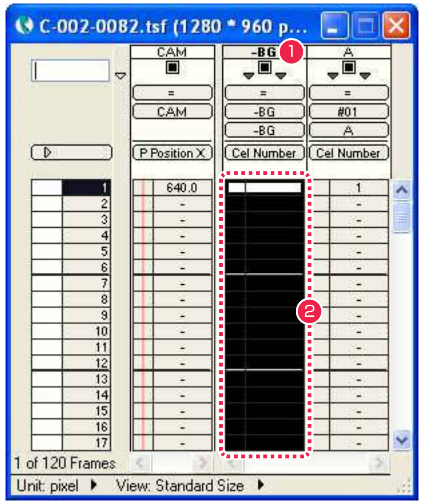
③ Input the single-byte number [1] in the [Parameter Input] field.

④ Press the [Enter] key to load [1] as the [Cel Number] to all of the [Data Cells].

05 X-sheet input 2 (Inputting cel numbers to the background)

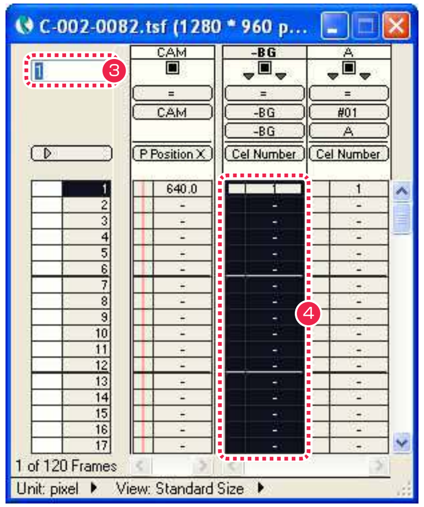
1. Selecting the whole background layer for inputting

In this example, since the same image will be used in the background layer from start to finish, all of the [Data Cells] of the layer should have their [Cel Number] input as [1].


C-002-0082.tsf (1280 * 960 p...
CAM
-BG
A
CAM
-BG
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
①
②
1 of 120 Frames
Unit: pixel
View: Standard Size

① Double-click the [Title Bar] of the [-BG] (Background Layer).

② All of the [Data Cells] of the [Background Layer] will be selected and will be shown inversed in black.


C-002-0082.tsf (1280 * 960 p...
1
③
CAM
-BG
A
CAM
-BG
-BG
#01
A
P Position X
Cel Number
Cel Number
640.0
④
1 of 120 Frames
Unit: pixel
View: Standard Size

③ Input the single-byte number [1] in the [Parameter Input] field.

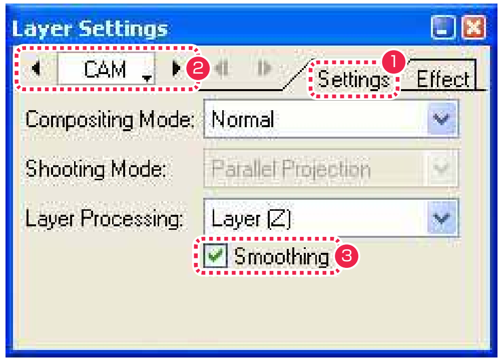
④ Press the [Enter] key to load [1] as the [Cel Number] to all of the selected [Data Cells].

06 Carrying out layer settings

For each layer of the X-sheet, specification of [Smoothing], [Compositing Mode], and [Mask Mode] is made.

1. Setting smoothing to the camera layer

Select [Layer Settings] from the [Window] menu to show the [Layer Settings] palette.


Layer Settings
②
①
Settings
Effect
③

CAM

Compositing Mode: Normal

Shooting Mode: Parallel Projection

Layer Processing: Layer (Z)

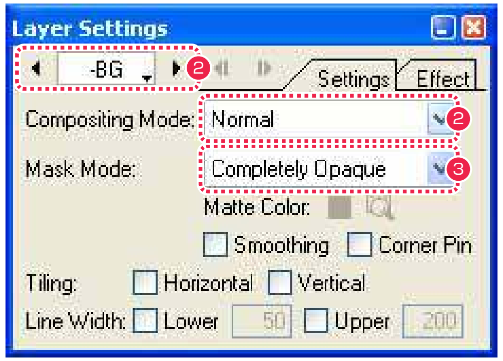
☑ Smoothing

① Click the [Settings] tab.

② Operate the [Select Layer] menu to select the [CAM] (Camera) layer.

③ Confirm that the check mark is present in the [Smoothing] box.

2. Setting the -BG layer


Layer Settings
②
Settings
Effect
②
③

-BG

Compositing Mode: Normal

Mask Mode: Completely Opaque

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

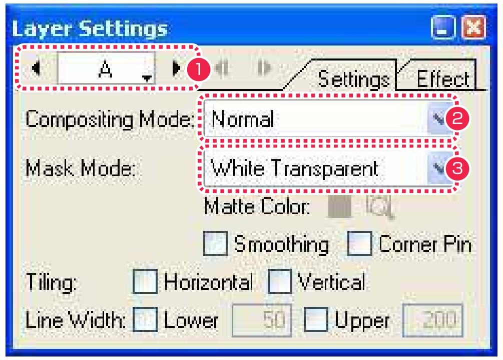
Line Width: ☐ Lower 50 ☐ Upper 200

① Operate the [Select Layer] menu to select the [-BG] (Background) layer.

② Confirm that the [Compositing Mode] is set to [Normal].

③ Confirm that the [Mask Mode] is set to [Completely Opaque].

3. Setting the [A] layer



Layer Settings

A ①

Compositing Mode: Normal ②

Mask Mode: White Transparent ③

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

① Operate the [Select Layer] menu to select the [A] layer.

② Confirm that the [Compositing Mode] is set to [Normal].

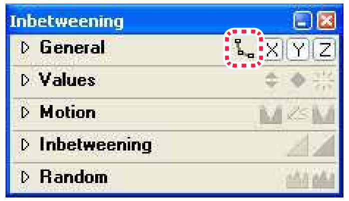
③ As the image is a [Mono Trace] image, confirm that the [Mask Mode] is set to [White Transparent].

07 Adjusting the position displacement

If there is displacement of the background or [Cel] positions, this should be adjusted.

1. Opening the inbetweening palette

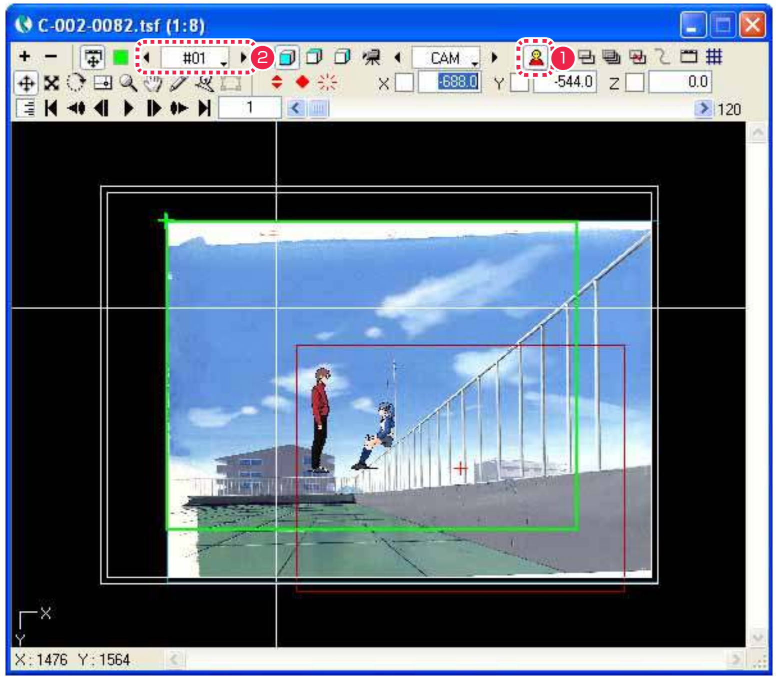
Select [Inbetweening Palette] from the [Window] menu to show the [Inbetweening] palette.



Confirm that the [Auto Refresh] button in the [General] tab is set to "Off" as shown in the figure.

2. Opening the stage window

Select [Stage] from the [Window] menu to show the [Stage] window.



C-002-0082.tsf (1:8)

#01 ②

CAM

①

X -688.0 Y -544.0 Z 0.0

1

120

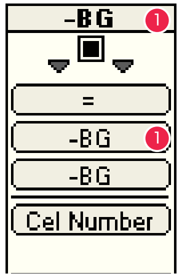
X : 1476 Y : 1564

① By clicking the [Image] button in the [Stage] window to set it to "On", the [Current Frame] image will be shown in the [Stage] area. (In the example shown, to make the display easier to understand, the view ratio and [Stage Size] [Center] position have been shifted)

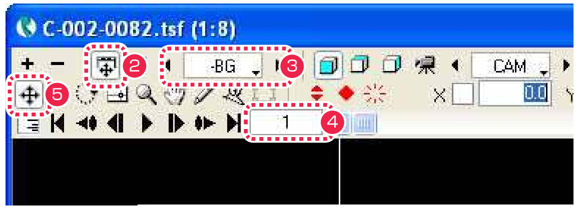
② Select the [CAM] layer (Camera Layer) from the [Select Pegbar/Layer] menu and confirm the range that will be captured by the camera.

3. Matching the background to the cel

Because there is displacement of the background position so that the characters appear to be floating in space, the positions of the background and [Cel] should be adjusted. First, the background pegbar should be moved to adjust the position.



① Confirm that the [-BG] (Background) layer is connected to the [-BG] pegbar.

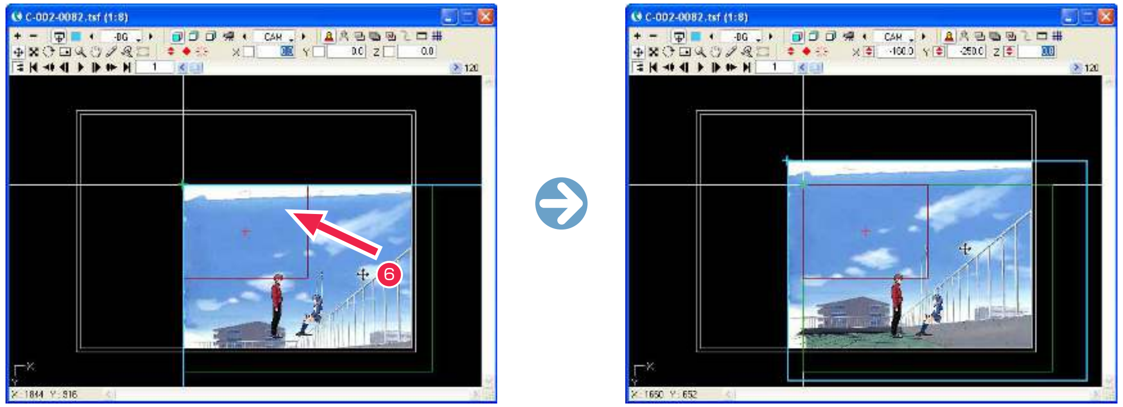


② Confirm that the [Stage] window [Pegbar Edit/Layer Edit] button is in the [Pegbar Edit] condition as shown in the figure.

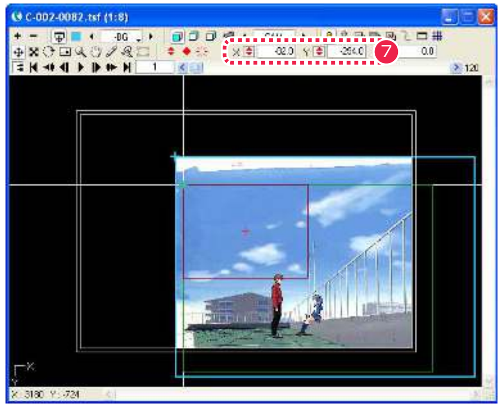
③ Click the [Select Pegbar/Layer] menu, and switch the operation target to the [-BG] pegbar.

④ Confirm that the [Current Layer] is set to the 1st Frame.

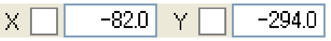
⑤ Select the [Move] tool.



⑥ Drag the background to roughly adjust its position.



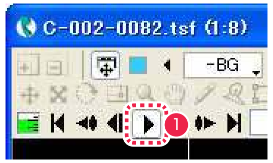
⑦ Detailed position adjusting should be carried out by directly inputting numbers in each of the [X] and [Y] fields.
To recreate the example, input the following figures:



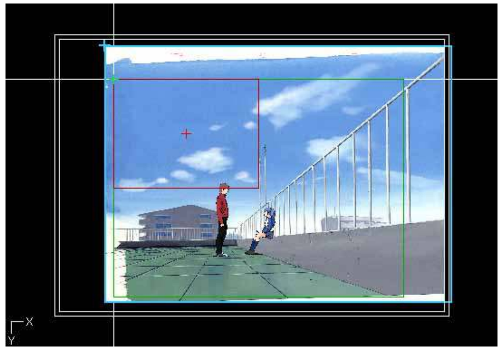
X ☐ -82.0 Y ☐ -294.0

[P Position X] [P Position Y]

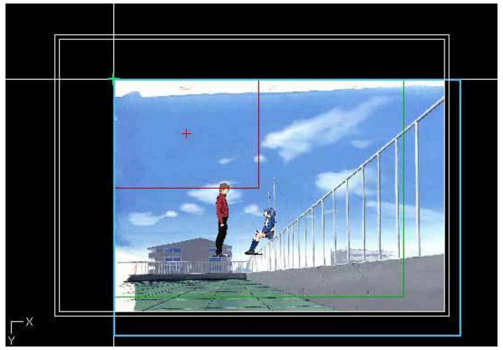
4. Fixing the pegbar position using all select



① By setting the [Play/Stop] button to "On", playback will begin on the [Stage], allowing the position of each frame to be confirmed (The movement speed will be different from the actual animation speed).

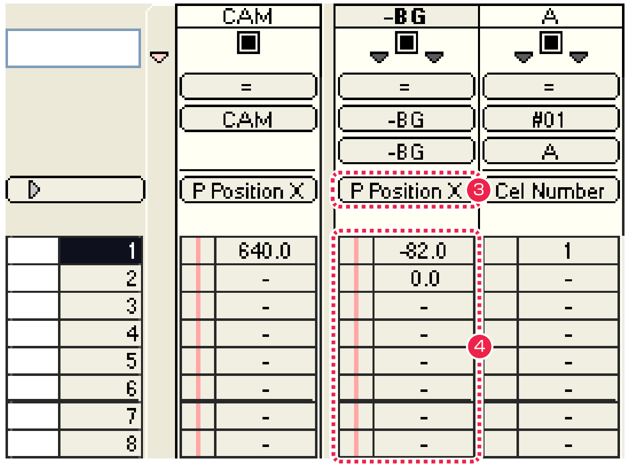


[1st Frame]



[2nd to 20th Frames]

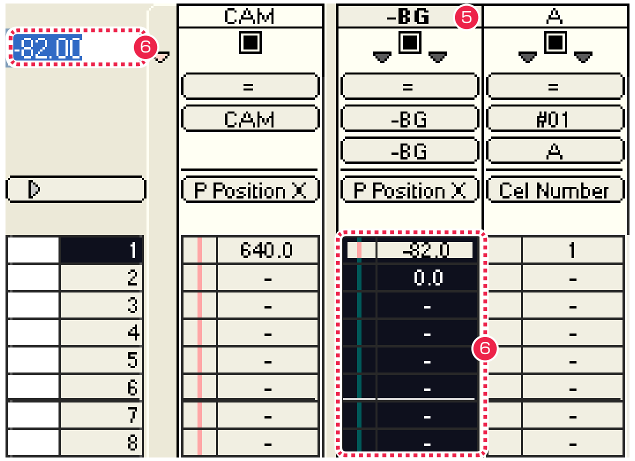
② Although the position of the 1st Frame has been adjusted, because the positions from the 2nd Frame onwards have not been adjusted, their background positions will be displaced.



	CAM	-BG	A
	=	=	=
	CAM	-BG	#01
		-BG	A
	P Position X	P Position X	Cel Number
1	640.0	-82.0	1
2	-	0.0	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-

③ Select [P Position X] from the [Input Parameter Selection Menu] of the [-BG] layer in the [X-sheet] window.

④ It is possible to confirm that the coordinates are displaced from the 2nd Frame onwards.

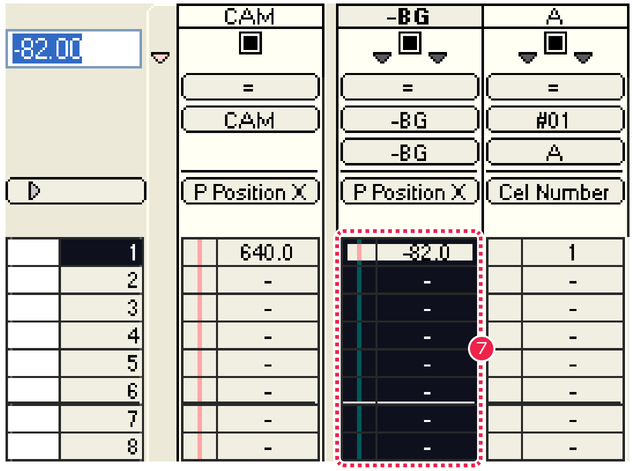


-82.00

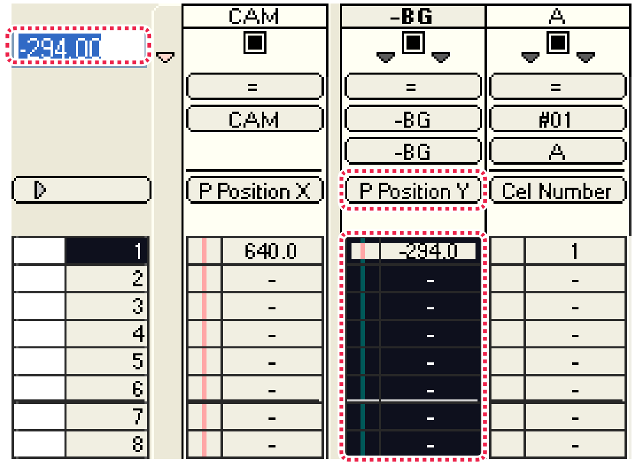
	CAM	-BG	A
	=	=	=
	CAM	-BG	#01
		-BG	A
	P Position X	P Position X	Cel Number
1	640.0	-82.0	1
2	-	0.0	-
3	-	-	-
4	-	-	-
5	-	-	-
6	-	-	-
7	-	-	-
8	-	-	-

⑤ Double-click the title bar of the [-BG] layer.

⑥ All of the frames of the [-BG] layer will change to the selected condition, and at the same time the 1st Frame value [-82] will appear in the [Parameter Input] field.

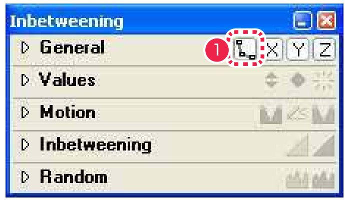

-82.00
CAM
-BG
A
=
CAM
-BG
-BG
#01
A
P Position X
P Position X
Cel Number
1
2
3
4
5
6
7
8
640.0
-82.0
1
⑦

⑦ By pressing the [Enter] key in this situation, the same value of the 1st Frame will be input to all the frames of the [-BG] layer.


-294.00
CAM
-BG
A
=
CAM
-BG
-BG
#01
A
P Position X
P Position Y
Cel Number
1
2
3
4
5
6
7
8
640.0
-294.0
1

⑧ In the same way, displaying the [Y] coordinate and then the [P Position Y] coordinate in turn, double-click on the title bar to select all the frames and press the [Enter] key to set all the frames to the same position as the 1st Frame.

5. Automatically setting the inbetweening positions


Inbetweening
General
①
X
Y
Z
Values
Motion
Inbetweening
Random

① Click the [Auto Refresh] button in the [General] pane of the [Inbetweening] palette to set it to the "On" condition.

POINT

Automatically arranging the pegbar position using the inbetweening palette

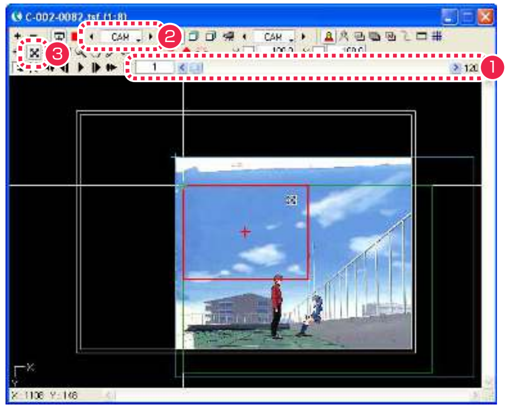
In the [4. Fixing the Pegbar Position using All Select] description on the previous page, an explanation was given of the procedure for setting all the frames (data cells) to the same parameters by manual input in order to allow understanding of the operation method when [Auto Refresh] is not used.

However, if the [Auto Refresh] button in the [General] tab on the [Inbetweening] palette is normally set to the "On" condition as shown in the figure above, when the parameters of the 1st Frame are changed, all the frames in the same layer (all the frames after the frame that has been changed) will have their parameters set to the same coordinates.

08 Setting the T.U. (track up)

1. Adjusting the camera size and position 1 (first key frame)

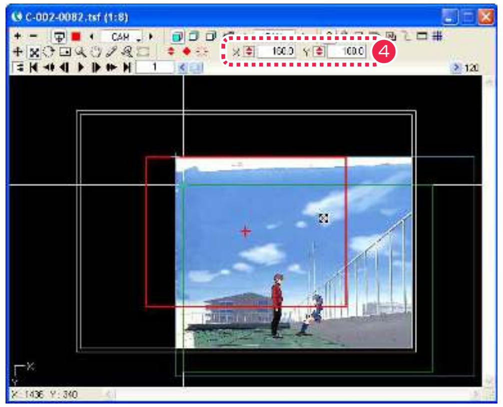
From here, the camera movement will be set. Since this example is a T.U. (Track Up) scene, the [Camera] pegbar scale value will be increased to start from a position that is further away.


C-002-0082.tsf (1:8)
CAM
①
②
③

① Drag the [Stage] window [Frame Slider] to the left-hand end to allow editing of the 1st Frame.

② Select [CAM] from the [Stage] window [Select Pegbar/Layer] menu.

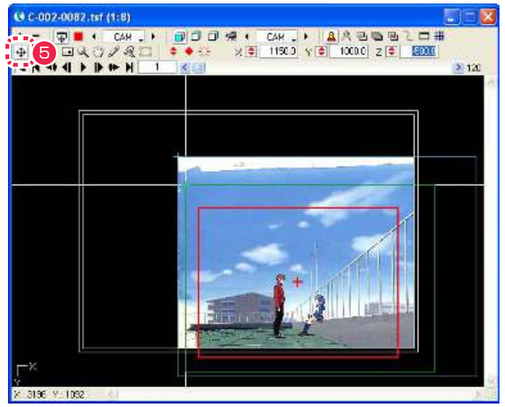
③ By selecting the [Scale] tool, the camera size can be adjusted using the dragging operation.


C-002-0082.tsf (1:8)
CAM
④

④ Detailed adjustment should be carried out by directly inputting numbers in each of the [X] and [Y] fields. To recreate the example, input the following figures:

X ☐ 160.0 Y ☐ 160.0

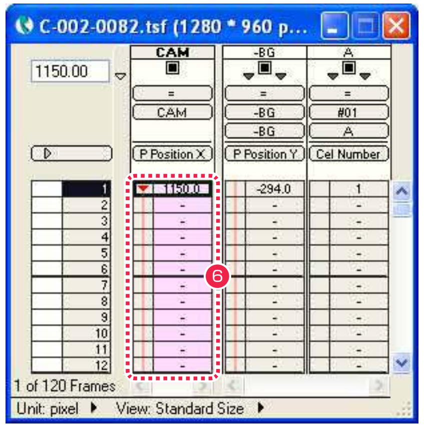
[P Scale X] [P Scale Y]


C-002-0082.tsf (1:8)
CAM
⑤

⑤ Adjustment of the position should be carried out using the [Move] tool. To recreate the example, input the following figures:

X ☐ 1150.0 Y ☐ 1000.0

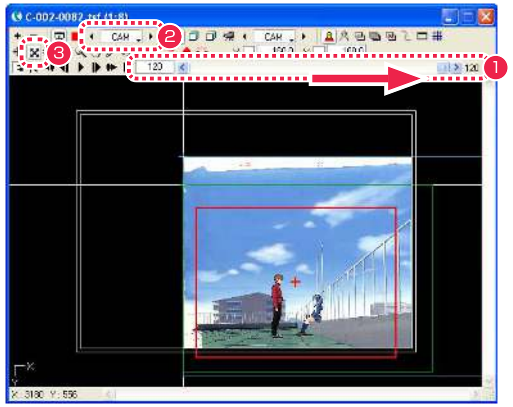
[P Position X] [P Position Y]


C-002-0082.tsf (1280 * 960 p...
1150.00
CAM
-BG
A
CAM
-BG
#01
-BG
A
P Position X
P Position Y
Cel Number
1150.0
-294.0
1
⑥
1 of 120 Frames
Unit: pixel
View: Standard Size

⑥ Adjustment of the camera size and position has been completed. Because the [Auto Refresh] button is set to "On", the changes in the camera position made in the 1st Frame will automatically be applied so that the 2nd Frame and following frames will also be changed to the same coordinates.

2. Adjusting the camera size and position 2 (last key frame)

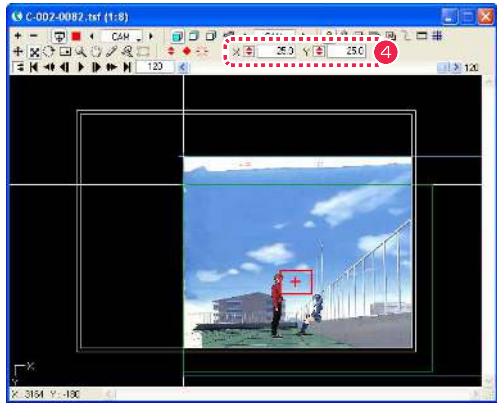
In the current situation, the camera is fixed and will have no movement (it will not move towards the screen). Accordingly, the last frame position should be set. Since this example is a T.U. (Track Up) scene, the camera scale value will be decreased to finish at a position that is closer to the subject.



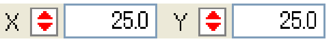
① Drag the [Stage] window [Frame Slider] to the right-hand end to allow editing of the last frame (120th Frame).

② Confirm that the pegbar is set to [CAM] using the [Select Pegbar/Layer] menu.

③ Select the [Scale] tool.

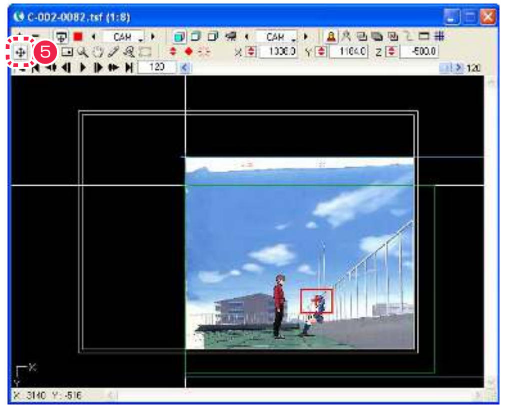


④ Either by dragging or by inputting numbers, change the camera size. To recreate the example, input the following figures:

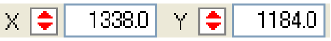


X 25.0 Y 25.0

[P Scale X] [P Scale Y]



⑤ Also adjust the position using the [Move] tool. To recreate the example, input the following figures:

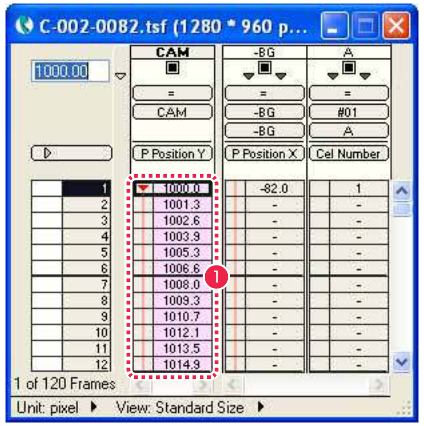


X 1338.0 Y 1184.0

[P Position X] [P Position Y]

3. Confirming the inbetweening

After adjusting the position, the inbetweening should be confirmed using the [X-sheet] window.


C-002-0082.tsf (1280 * 960 p...

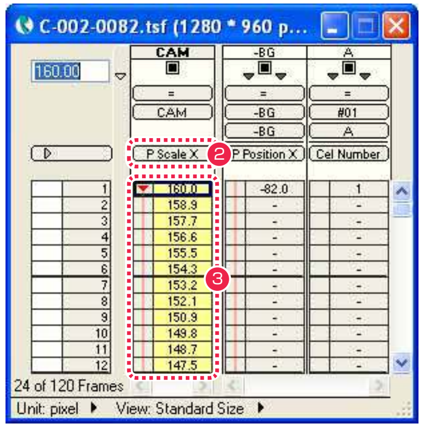
1000.00

	CAM	-BG	A
	=	=	=
	CAM	-BG	#01
		-BG	A
	P Position Y	P Position X	Cel Number
1	1000.0	-82.0	1
2	1001.3	-	-
3	1002.6	-	-
4	1003.9	-	-
5	1005.3	-	-
6	1006.6	-	-
7	1008.0	-	-
8	1009.3	-	-
9	1010.7	-	-
10	1012.1	-	-
11	1013.5	-	-
12	1014.9	-	-

1 of 120 Frames

Unit: pixel View: Standard Size

① Because the [Auto Refresh] button of the [Inbetweening] palette was set to "On", when the changes are made to the 120th Frame, the 120th Frame will become a key frame and inbetweening will be automatically applied to determine the positions (camera positions) between the key frames.


C-002-0082.tsf (1280 * 960 p...

160.00

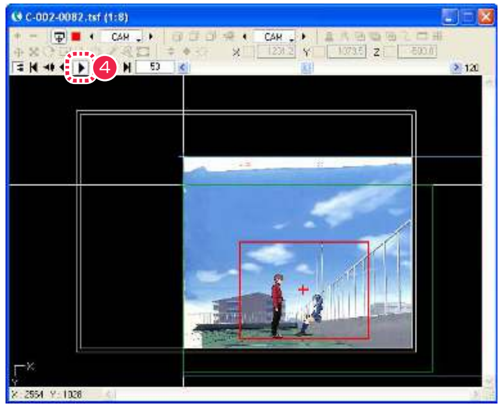
	CAM	-BG	A
	=	=	=
	CAM	-BG	#01
		-BG	A
	P Scale X	P Position X	Cel Number
1	160.0	-82.0	1
2	158.9	-	-
3	157.7	-	-
4	156.6	-	-
5	155.5	-	-
6	154.3	-	-
7	153.2	-	-
8	152.1	-	-
9	150.9	-	-
10	149.8	-	-
11	148.7	-	-
12	147.5	-	-

24 of 120 Frames

Unit: pixel View: Standard Size

② Select [P Scale X] from the [Input Parameter Selection] Menu.

③ The change in size of the camera pegbar, and the camera size between the key frames, will also be automatically determined by the inbetweening.



④ Click the [Play/Stop] button of the [Stage] window to start playback. The change in the camera frame position and size due to the automatic inbetweening can be seen. Clicking the [Play/Stop] button once more will stop the playback.

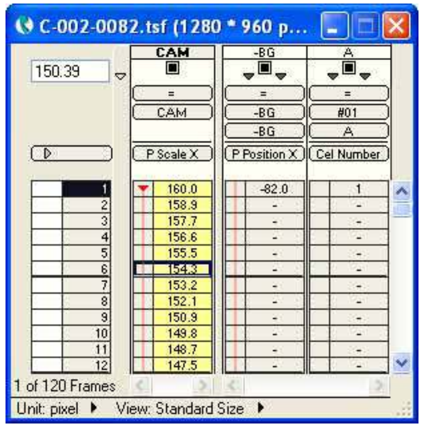
COLUMN

Various inbetweening modes

When carrying out T.U. (Track Up), although the camera is sometimes moved towards the screen at a fixed speed as in the example, the camera may also be moved with an acceleration. The difference in the inbetweening mode applied between the two key frames can be set using [Inbetweening] [Type] in the [Inbetweening] palette.

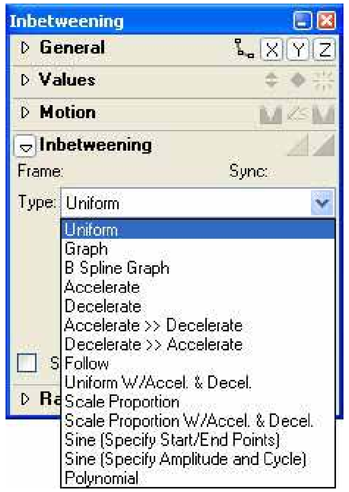
Changing the inbetweening mode

The [Type] of inbetweening set can be changed afterwards.


C-002-0082.tsf (1280 * 960 p...
150.39
CAM
CAM
P Scale X
-BG
-BG
-BG
P Position X
A
#01
A
Cel Number
1 of 120 Frames
Unit: pixel
View: Standard Size

	P Scale X	P Position X	Cel Number
1	160.0	-82.0	1
2	158.9	-	-
3	157.7	-	-
4	156.6	-	-
5	155.5	-	-
6	154.3	-	-
7	153.2	-	-
8	152.1	-	-
9	150.9	-	-
10	149.8	-	-
11	148.7	-	-
12	147.5	-	-

① In the [X-sheet] window, click on any optional [Data Cell] between the two [CAM] layer key frames in which the inbetweening has been set.


Inbetweening
General
X
Y
Z
Values
Motion
Inbetweening
Frame:
Sync:
Uniform
Graph
B Spline Graph
Accelerate
Decelerate
Accelerate >> Decelerate
Decelerate >> Accelerate
Follow
Uniform W/Accel. & Decel.
Scale Proportion
Scale Proportion W/Accel. & Decel.
Sine (Specify Start/End Points)
Sine (Specify Amplitude and Cycle)
Polynomial

Type: Uniform

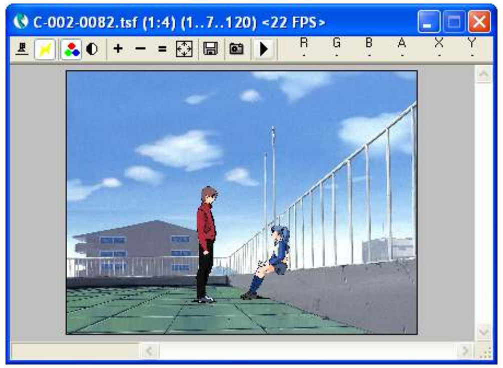
② The currently set [Type] of inbetweening of the selected [Key Frame Section] is shown in the [Inbetweening] pane of the [Inbetweening] palette. In the example, the inbetweening between the 2 frames has been set to [Uniform] (fixed interval). (The inbetweening method that is selected will differ according to the previously conducted operation conditions.)

For example, if the setting is changed to the [Accelerate >> Decelerate] allocation, the parameters and inbetweening will change to match this setting.

For the inbetweening modes, see Chapter 4 [Application Description: Shooting].

09 Confirming the preview

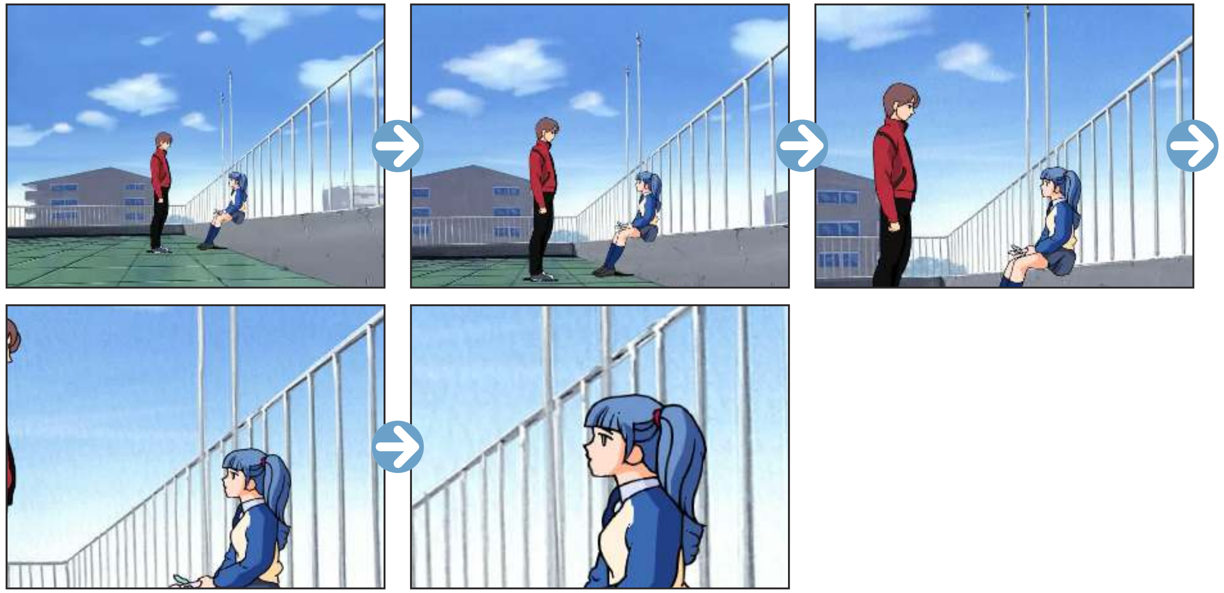
When the actual camera movement is to be confirmed, [RAM Preview] should be used. By selecting [Rendering] from the [Window] menu, or selecting [RAM Preview] from the [file] menu, looped playback will begin in the [Rendering] window.


C-002-0082.tsf (1:4) (1..7..120) <22 FPS>
R
G
B
A
X
Y

Pressing the [Esc] key will stop the looped playback.

10 Confirming the completed animation

Export the completed scene as a movie file (export size set to [1/2]) to confirm the animation.



After completing the work, be sure to remember to save the [Shooting X-sheet] file (*.tsf).

Step: 03 Shooting flow 3: Follow and SL (slide)

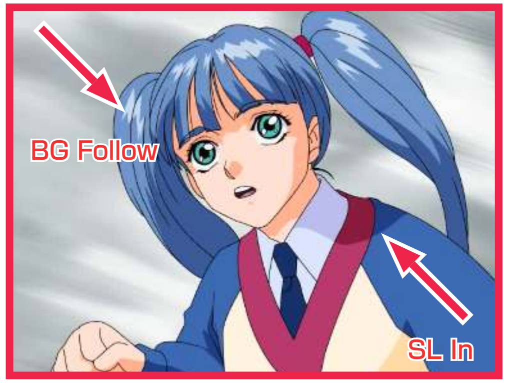
In this step, an explanation is given of the shooting method in Follow and SL (Slide) scenes.

Preparing the materials

An explanation will be given of the shooting method for scenes in which the background and [Cels] are displaced.

Here we will use the following image data as the sample.

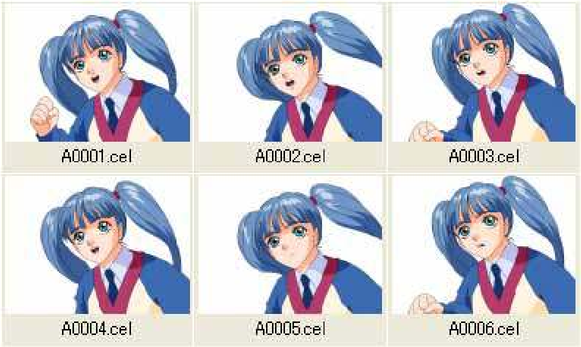
「C-001-0068」


BG Follow
SL In

Follow and SL scene image

The sample data incorporates the following images.

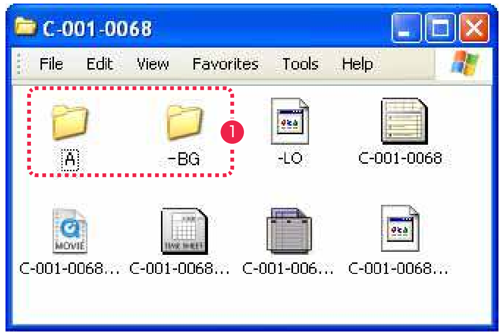
[-BG] Folder [Background] 1 image


A0001.cel
A0002.cel
A0003.cel
A0004.cel
A0005.cel
A0006.cel

[A] Folder [Cels] 6 images

Deleting the X-sheet files

The sample data [C-001-0068] is contained in the [RasterDrawings] folder in [SampleData] in the [CoreRETAS HD] folder on the attached [Manual and Sample Data DISC2].


C-001-0068
File
Edit
View
Favorites
Tools
Help
A
-BG
①
-LO
C-001-0068
C-001-0068...
C-001-0068...
C-001-006...
C-001-0068...

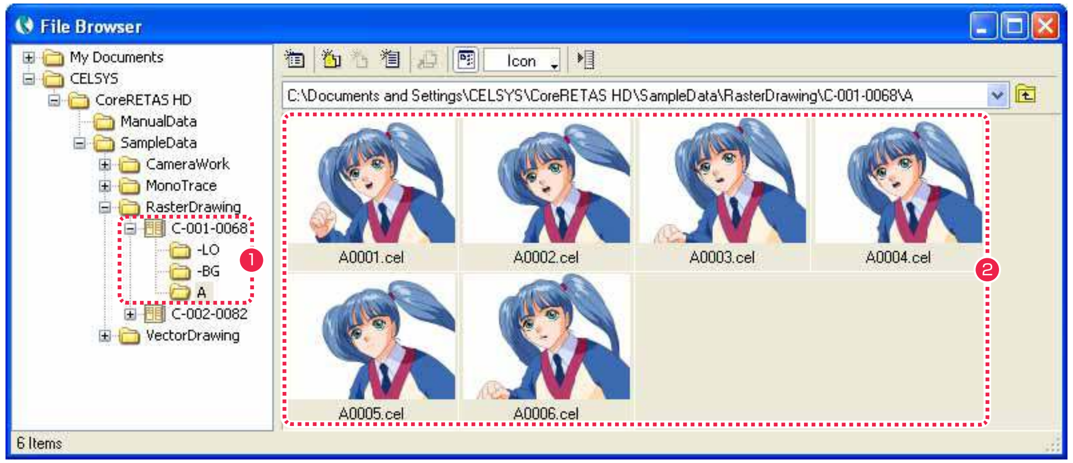
① To allow study of the flow of the shooting, copy the sample data [C-001-0068] folder to the hard disc of your computer. Then, leaving only the folders containing the images ([A] and [-BG]), delete all the other files.

01 Confirming the materials using the file browser

Start up CoreRETAS HD, and confirm the materials contained in the [Scene Folder].

1. Opening the file browser

Select [File Browser] from the [Window] menu to show the [File Browser].


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
-LO
-BG
A
①
C-002-0082
VectorDrawing
Icon
A0001.cel
A0002.cel
A0003.cel
A0004.cel
A0005.cel
A0006.cel
②

C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\RasterDrawing\C-001-0068\A

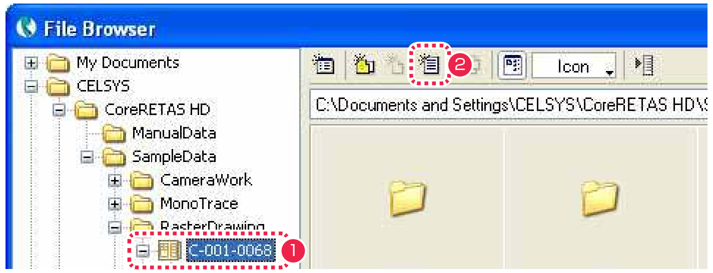
6 Items

① Select each of the folders in [C-001-0068].

② Confirm that the material images are all included in the [Scene Folder].

02 Creating a shooting X-sheet from a paper X-sheet

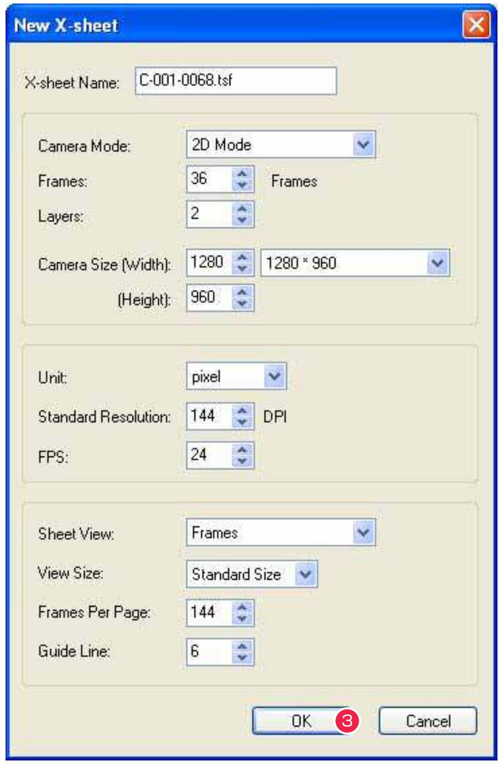
1. Creating an X-sheet file


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
❶
❷
Icon

C:\Documents and Settings\CELSYS\CoreRETAS HD\

❶ In the [File Browser], select the scene folder [C-001-0068].

❷ Click the [New X-sheet...] button to show the [New X-sheet] dialog box.


New X-sheet
OK
❸
Cancel

X-sheet Name: C-001-0068.tsf

Camera Mode: 2D Mode

Frames: 36 Frames

Layers: 2

Camera Size (Width): 1280 1280 * 960

(Height): 960

Unit: pixel

Standard Resolution: 144 DPI

FPS: 24

Sheet View: Frames

View Size: Standard Size

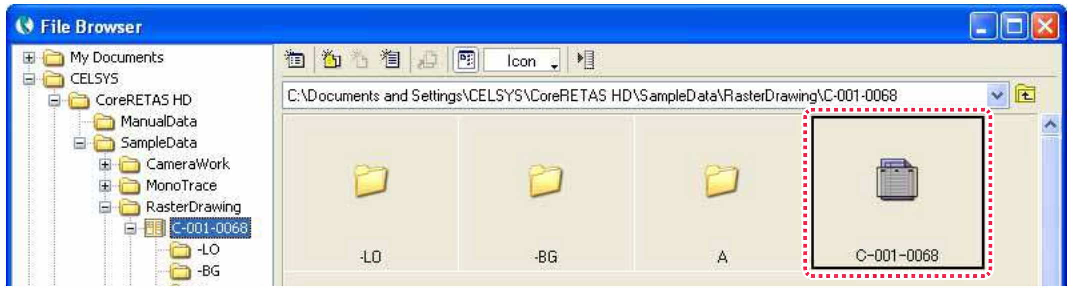
Frames Per Page: 144

Guide Line: 6

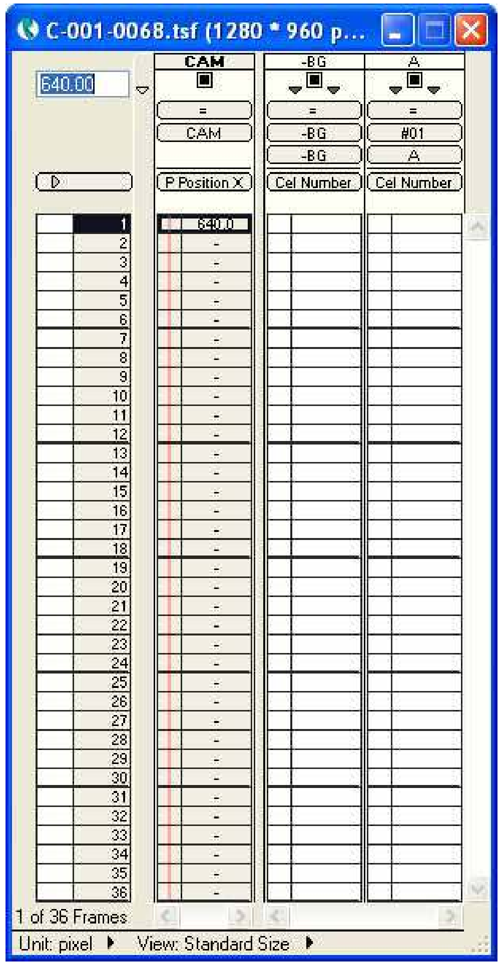
❸ As shown above, input the various settings and then click the [OK] button. The [Shooting X-sheet File] (*.tsf) will be created inside the selected scene folder.

2. Opening the X-sheet window

Double-click the [Shooting X-sheet] icon to show the X-sheet window.


File Browser
My Documents
CELSYS
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
RasterDrawing
C-001-0068
-LO
-BG
Icon
-LO
-BG
A
C-001-0068

C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\RasterDrawing\C-001-0068


C-001-0068.tsf (1280 * 960 p...
640.00
CAM
-BG
A
=
CAM
-BG
#01
-BG
A
P Position X
Cel Number
Cel Number
640.0

1 of 36 Frames

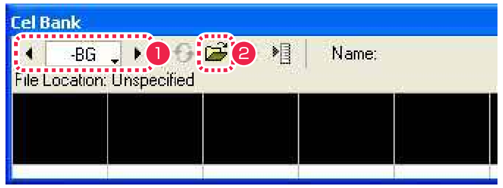
Unit: pixel View: Standard Size

03 Loading the materials in the cel banks

This loads the image materials such as backgrounds and [Cels] in the cel banks.

1. Loading the background to the cel bank

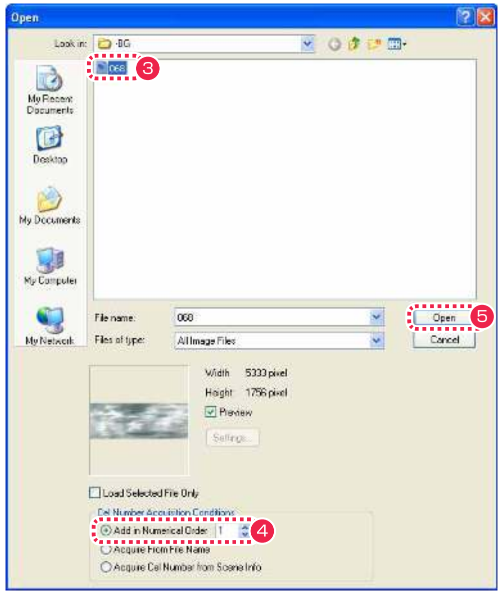
Select [Cel Bank] from the [Window] menu to show the [Cel Bank] palette.


Cel Bank
-BG
①
②
Name:

File Location: Unspecified

① From the [Select Cel Bank] menu, select cel bank [-BG] as the loading destination.

② Clicking the [Load...] button will show the [Open] dialog box.


Open
Look in: -BG
③
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open
⑤
Cancel
Settings...
④

File name: 068

Files of type: All Image Files

Width 5333 pixel

Height 1756 pixel

☑ Preview

☐ Load Selected File Only

Cel Number Acquisition Conditions

● Add in Numerical Order 1

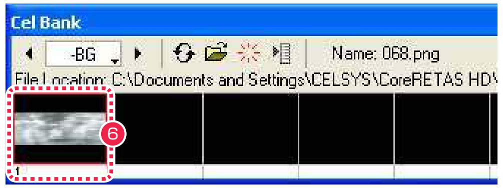
○ Acquire From File Name

○ Acquire Cel Number from Scene Info

③ Select the [-BG] folder image in the scene folder [C-001-0068].

④ Select [Add in Numerical Order].

⑤ Click the [Open] button.


Cel Bank
-BG
⑥
1

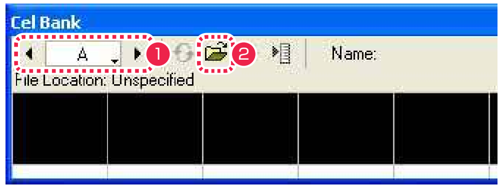
Name: 068.png

File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\

⑥ The image will be loaded to the [Cel Bank].

---

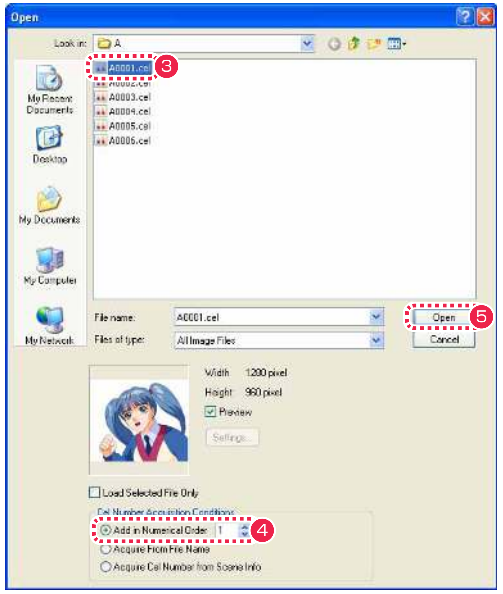
2. Loading the A cels to the cel bank


Cel Bank
A
①
②
Name:

File Location: Unspecified

① Select the load destination cel bank [A] from the [Select Cel Bank] menu.

② Click the [Load...] button to show the [Open] dialog box.


Open
Look in: A
A0001.cel
③
A0002.cel
A0003.cel
A0004.cel
A0005.cel
A0006.cel
My Recent Documents
Desktop
My Documents
My Computer
My Network
Open
⑤
Cancel
Settings...
④

File name: A0001.cel

Files of type: All Image Files

Width 1280 pixel

Height 960 pixel

☑ Preview

☐ Load Selected File Only

Cel Number Acquisition Conditions

● Add in Numerical Order 1

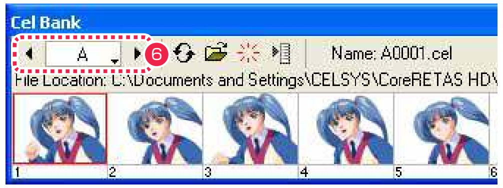
○ Acquire From File Name

○ Acquire Cel Number from Scene Info

③ Select any one of the images in the [A] folder inside the scene folder [C-001-0068].

④ Select [Add in Numerical Order].

⑤ Click the [Open] button.


Cel Bank
A
⑥
1
2
3
4
5
6

Name: A0001.cel

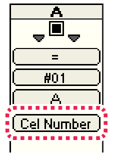
File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\

⑥ All of the images in the [A] folder will be loaded into the [Cel Bank].

04 X-sheet input 1 (automatically inputting the cel numbers)

Looking at the paper X-sheet, input the cel numbers into the [X-sheet] window.

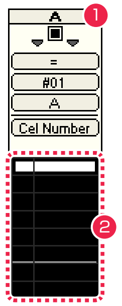
1. Switching to cel number as the input parameter


A
=
#01
A
Cel Number

Switch the display of the [A] layer [Input Parameter Setting] menu to show [Cel Number].

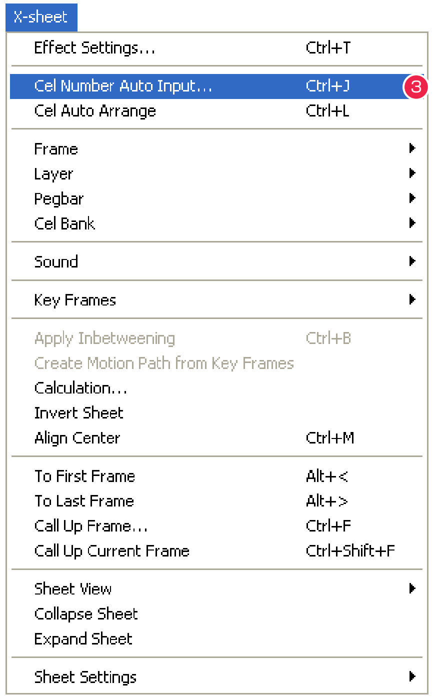
2. Automatically inputting the cel numbers

In this scene, the X-sheet [A] layer [Cel Numbers] [1] to [6] will each be allocated three frames, and the sequence will be repeated. In this kind of situation where the [Cel Numbers] are input following set rules, rather than inputting each value from the keyboard it is more convenient to use the [Cel Number Auto Input] function.

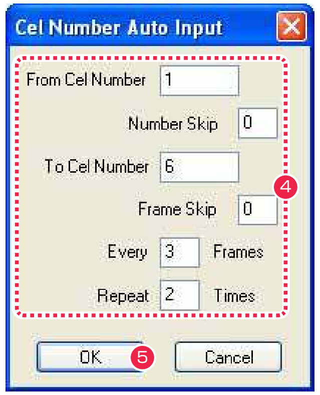

A
①
=
#01
A
Cel Number
②

① Double-click the [Title Bar] of the [A] layer.

② All of the [Data Cells] of the [A] layer will be selected and will be shown inversed in black.


X-sheet
Effect Settings… Ctrl+T
Cel Number Auto Input… Ctrl+J
③
Cel Auto Arrange Ctrl+L
Frame
Layer
Pegbar
Cel Bank
Sound
Key Frames
Apply Inbetweening Ctrl+B
Create Motion Path from Key Frames
Calculation…
Invert Sheet
Align Center Ctrl+M
To First Frame Alt+<
To Last Frame Alt+>
Call Up Frame… Ctrl+F
Call Up Current Frame Ctrl+Shift+F
Sheet View
Collapse Sheet
Expand Sheet
Sheet Settings

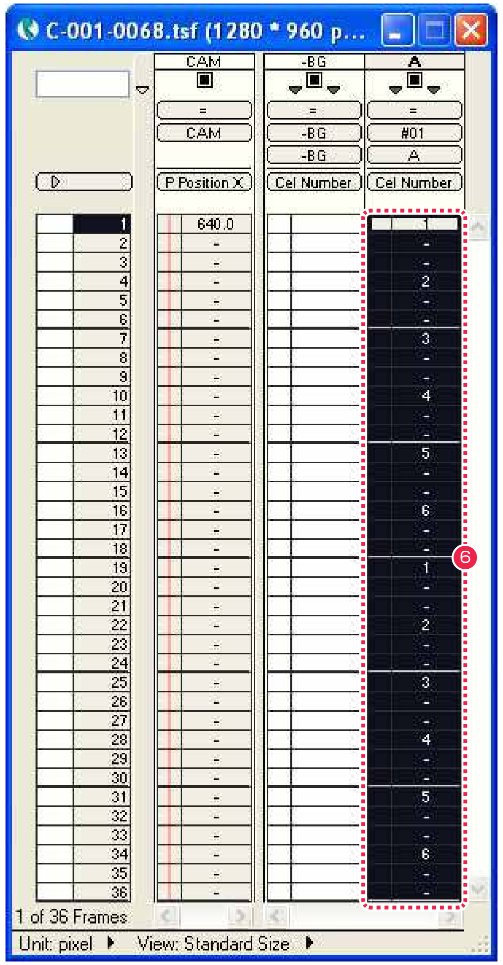
③ Select [Cel Number Auto Input...] from the [X-sheet] menu to show the [Cel Number Auto Input] dialog box.


Cel Number Auto Input
④
OK
⑤
Cancel

From Cel Number: 1
Number Skip: 0
To Cel Number: 6
Frame Skip: 0
Every 3 Frames
Repeat 2 Times

④ Input the vales in each field. In this case, by [3] frame arranges cel from [1] turns to [6] turns and inputs it to repeat [2] times these.

⑤ Click the [OK] button.

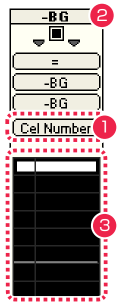

C-001-0068.tsf (1280 * 960 p...
CAM
-BG
A
#01
P Position X
Cel Number
Cel Number
640.0
⑥
1 of 36 Frames
Unit: pixel
View: Standard Size

⑥ The [Cel Numbers] will be input into all of the [Data Cells] of the [A] cel layer following the specification.

05 X-sheet input 2 (inputting cel numbers to the background)

Since the background layer generally uses the same image from start to finish, all of the frames in the same layer should have their [Cel Number] input as [1].

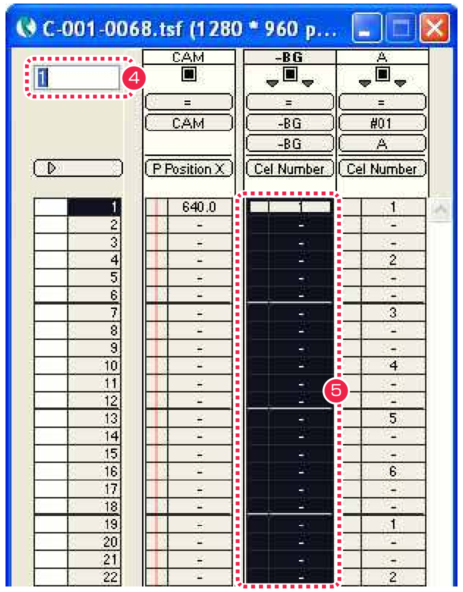
1. Selecting the whole background layer for inputting


-BG
②
-BG
-BG
Cel Number
①
③

① Switch the display of the [-BG] layer [Input Parameter Selection] menu to [Cel Number].

② Double-click the [Title Bar] of the [-BG] (Background Layer).

③ All of the [Data Cells] of the [Background Layer] will be selected and will be shown inversed in black.


C-001-0068.tsf (1280 * 960 p...
1
④
CAM
-BG
A
#01
P Position X
Cel Number
Cel Number
640.0
⑤

④ Input the single-byte number [1] in the [Parameter Input] field.

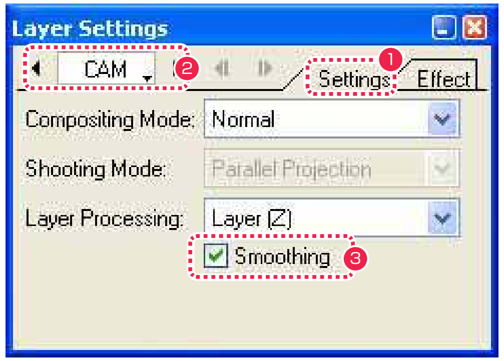
⑤ Press the [Enter] key to load [1] as the [Cel Number] to all of the selected [Data Cells].

06 Carrying out layer settings

For each layer of the X-sheet, specification of [Smoothing], [Compositing Mode], and [Mask Mode] is made.

1. Setting smoothing to the camera layer

Select [Layer Settings] from the [Window] menu to show the [Layer Settings] palette.



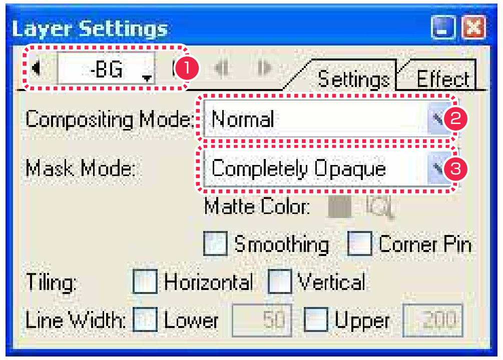
Compositing Mode: Normal
Shooting Mode: Parallel Projection
Layer Processing: Layer (Z)
☑ Smoothing

① Click the [Settings] tab.

② Operate the [Select Layer] menu to select the [CAM] (Camera) layer.

③ Confirm that the check mark is present in the [Smoothing] box.

2. Setting the background layer



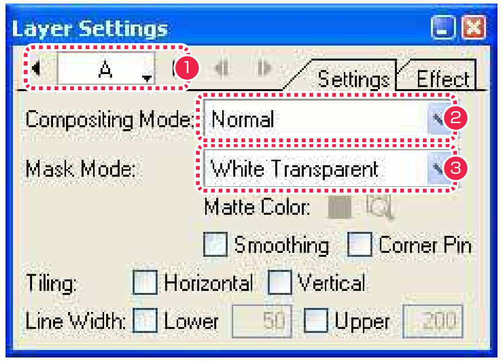
Compositing Mode: Normal
Mask Mode: Completely Opaque
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

① Operate the [Select Layer] menu to select the [-BG] (Background) layer.

② Confirm that the [Compositing Mode] is set to [Normal].

③ Confirm that the [Mask Mode] is set to [Completely Opaque].

3. Setting the [A] layer



Compositing Mode: Normal
Mask Mode: White Transparent
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

① Operate the [Select Layer] menu to select the [A] layer.

② Confirm that the [Compositing Mode] is set to [Normal].

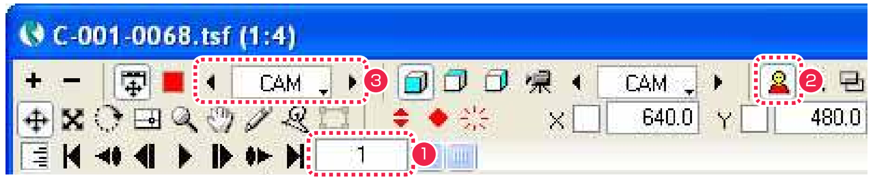
③ As the image is a [Mono Trace] image, confirm that the [Mask Mode] is set to [White Transparent].

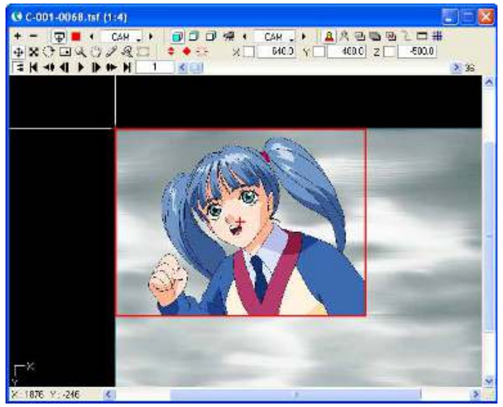
07 Carrying out the follow

In order to make it appear as though the character is moving, shooting is carried out while moving the background.

1. Opening the stage window

Select [Stage] from the [Window] menu to show the [Stage] window.


C-001-0068.tsf (1:4)
CAM
③
CAM
②
640.0
480.0
1
①



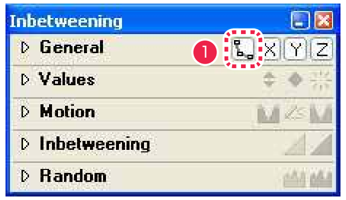
① Confirm that the [Current Frame] is set to the 1st Frame.

② Set the [Image] button to "On" to show the [Current Frame] image in the [Stage] Area.

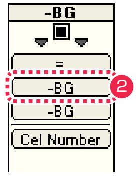
③ Select the [CAM] pegbar from the [Select Pegbar/Layer] menu and confirm the range captured by the camera.

2. Adjusting the background angle

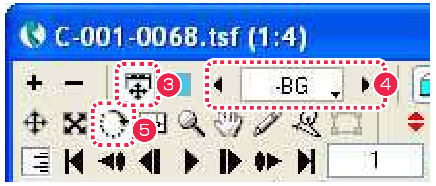
Since the background position and angle will not be matched, they should be arranged in the correct condition. First the angle should be adjusted. Show the [Inbetweening] palette by selecting it from the [Window] menu.


Inbetweening
General
①
X
Y
Z
Values
Motion
Inbetweening
Random

① Confirm that the [Auto Refresh] button in [General] is in the "On" condition as shown in the diagram.


-BG
=
-BG
②
-BG
Cel Number

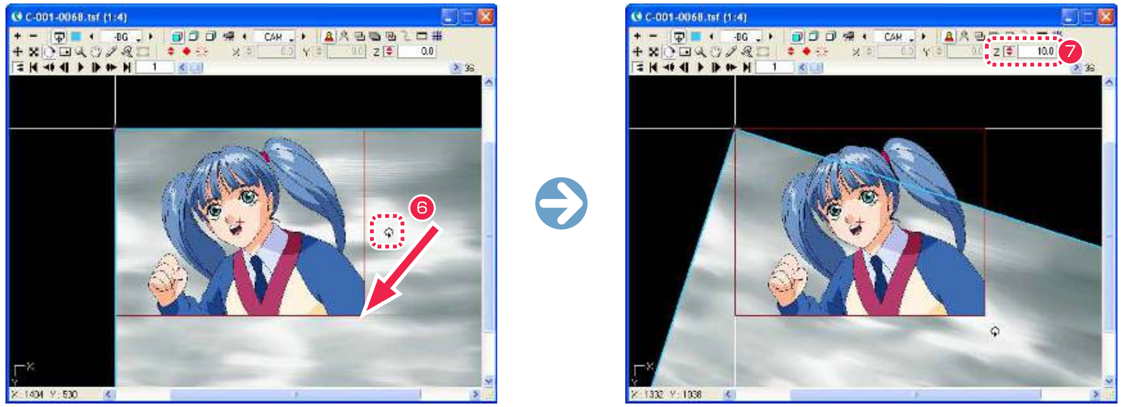
② In the [X-sheet] window, confirm that the [-BG] layer is connected to the [-BG] pegbar.


C-001-0068.tsf (1:4)
③
-BG
④
⑤
1

③ Confirm that the [Stage] window [Pegbar Edit/Layer Edit] button is set to the [Pegbar Edit] condition, as shown in the figure.

④ Switch the operation target of the [Select Pegbar/Layer] menu to the [-BG] pegbar.

⑤ Select the [Rotate] tool.



⑥ Drag the background on the stage to adjust the angle.

⑦ It is also possible to input the angle as a value from the [Z] field.

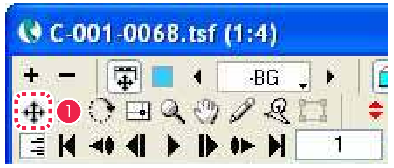
To recreate the example, input the following figures:

Z ☐ 18.0

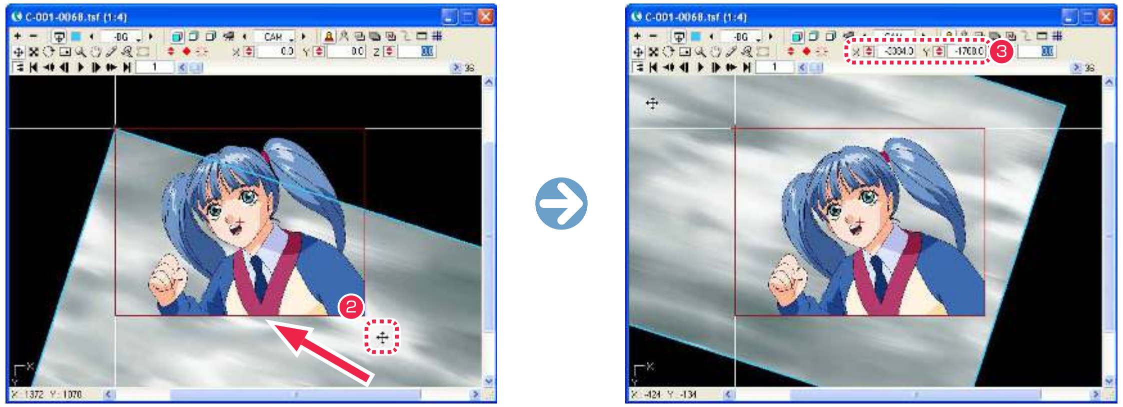
[P Rotation]

* In 2D mode, the rotation angle is set using the [Z] value.

3. Adjusting the background position



① Select the [Move] tool.



② Drag the background to adjust the position.

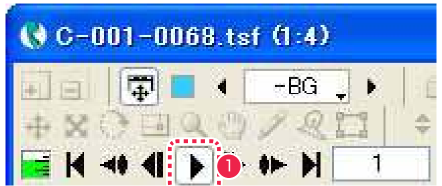
③ It is also possible to input the position as values from the [X] and [Y] fields.

To recreate the example, input the following figures:

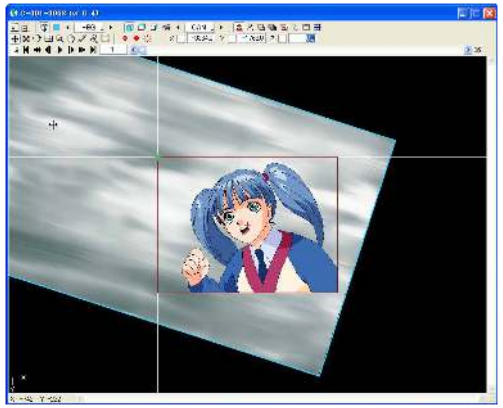
X ☐ -3384.0 Y ☐ -1768.0

[P Position X] [P Position Y]

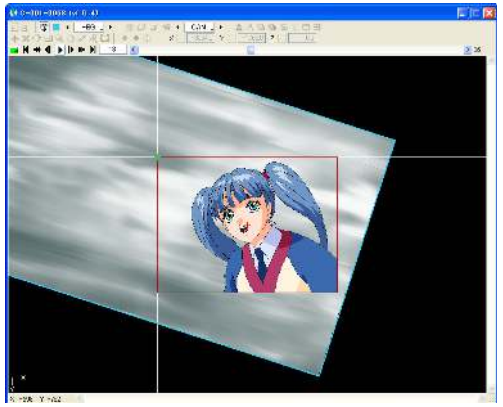
4. Confirming the coordinate shift


C-001-0068.tsf (1:4)
-BG
1
❶

❶ By clicking the [Play/Stop] button of the [Stage] window to set it to "On", playback will begin on the [Stage], allowing confirmation of the position of each frame(The movement speed will be different from the actual animation speed).



[the 1st Frame]



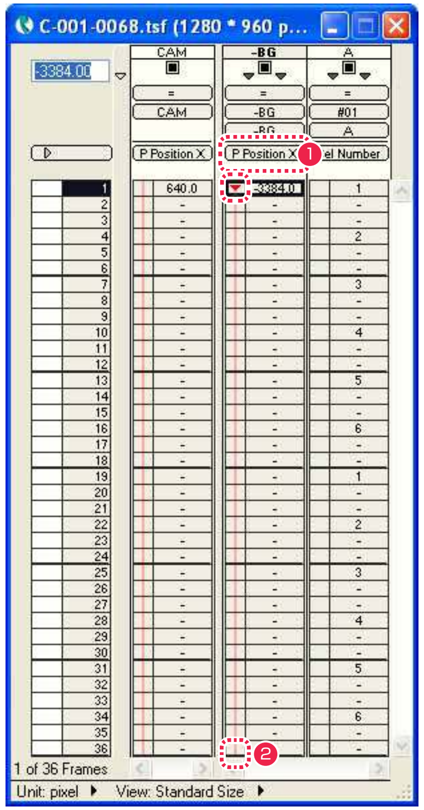
[after the 2nd Frame]

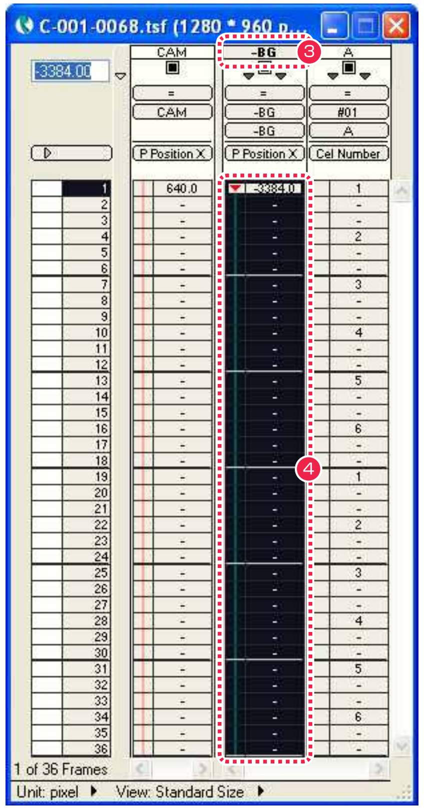
❷ Although the background 1st Frame angle and position have been changed, because the coordinates of the 2nd Frame and subsequent frames will be the same, the background will stay static.

❸ Clicking the [Play/Stop] button to set it to the "Off" condition will stop the playback.

5. Applying inbetweening to the background

Set a non-continuous key frame to the last frame, and carry out background automatic inbetweening.


C-001-0068.tsf (1280 * 960 p...
-3384.00
CAM
-BG
A
#01
P Position X
P Position X
el Number
640.0
-3384.0
❶
❷
1 of 36 Frames
Unit: pixel
View: Standard Size

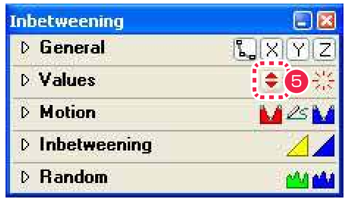

C-001-0068.tsf (1280 * 960 p...
-3384.00
CAM
-BG
A
#01
P Position X
P Position X
Cel Number
640.0
-3384.0
❸
❹
1 of 36 Frames
Unit: pixel
View: Standard Size

❶ Click the pegbar position of the [-BG] layer to show [P Position X].

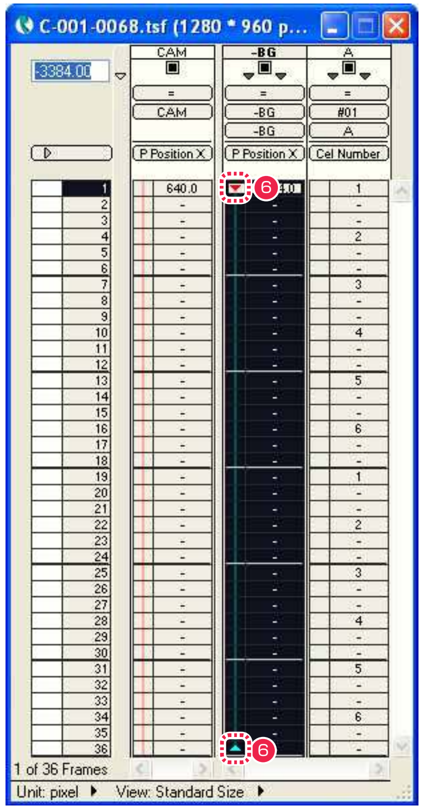
❷ A non-continuous key frame has been set to the 1st Frame, but a non-continuous key frame is not set to the last frame.

❸ Double-click the title bar of the [-BG] layer.

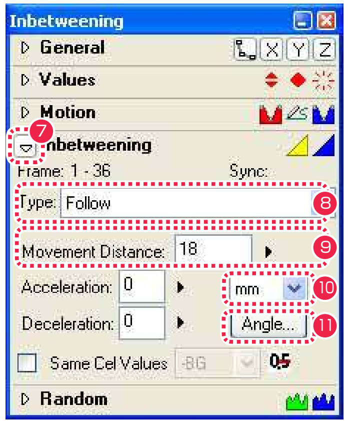
❹ All of the frames in the [-BG] layer will be in the selected condition.


Inbetweening
General
X Y Z
Values
⑤
Motion
Inbetweening
Random

⑤ Click the [Non-continuous Key Frame Settings] button in the [Value] pane of the [Inbetweening] palette.


C-001-0068.tsf (1280 * 960 p...
-3384.00
CAM
-BG
A
CAM
-BG
#01
P Position X
P Position X
Cel Number
640.0
⑥
⑥
1 of 36 Frames
Unit: pixel
View: Standard Size

⑥ The [Non-continuous Key Frame] is set to the first and last parts.


Inbetweening
General
X Y Z
Values
Motion
⑦
Inbetweening
⑧
⑨
⑩
⑪
Random

Frame: 1 - 36 Sync:

Type: Follow

Movement Distance: 18

Acceleration: 0 mm

Deceleration: 0 Angle...

☐ Same Cel Values -BG 0.5

⑦ In this situation, click the [Inbetweening] switch of the [Inbetweening] palette to open it.

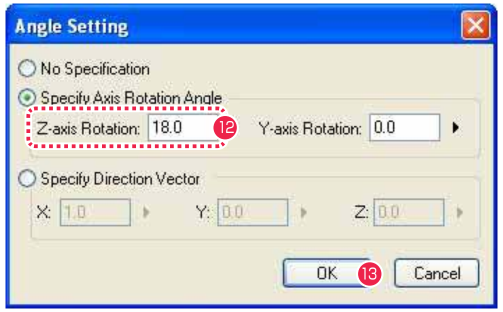
⑧ Select [Follow] from the [Type] pop-up menu.

[Follow] is an inbetweening mode in which the coordinates of the start position have to be determined, and inbetweening can be carried out simply by setting the movement distance and angle between each frame.

⑨ Input the movement distance between each frame.

⑩ Select [mm] from the units.

⑪ Click the [Angle...] button to show the [Angle Setting] dialog box.


Angle Setting
⑫
⑬
OK
Cancel

○ No Specification

● Specify Axis Rotation Angle

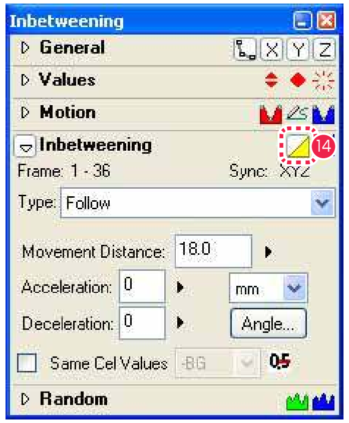
Z-axis Rotation: 18.0 Y-axis Rotation: 0.0

○ Specify Direction Vector

X: 1.0 Y: 0.0 Z: 0.0

⑫ Input the angle in [Z-axis Rotation].

⑬ Click the [OK] button.


Inbetweening
General
X Y Z
Values
Motion
Inbetweening
⑭
Random

Frame: 1 - 36 Sync: XYZ

Type: Follow

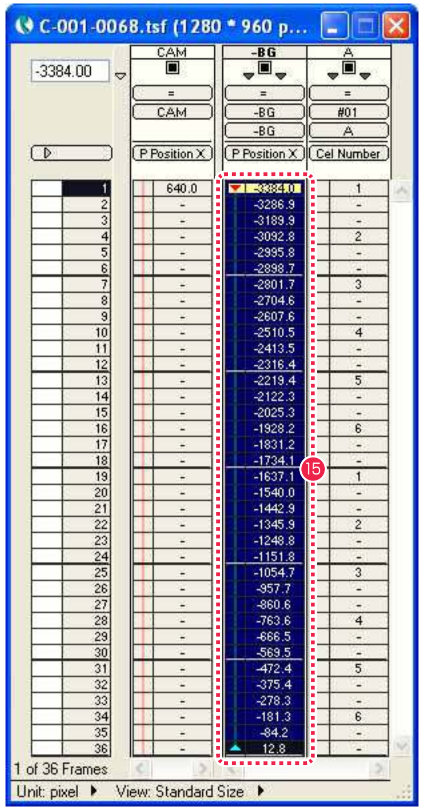
Movement Distance: 18.0

Acceleration: 0 mm

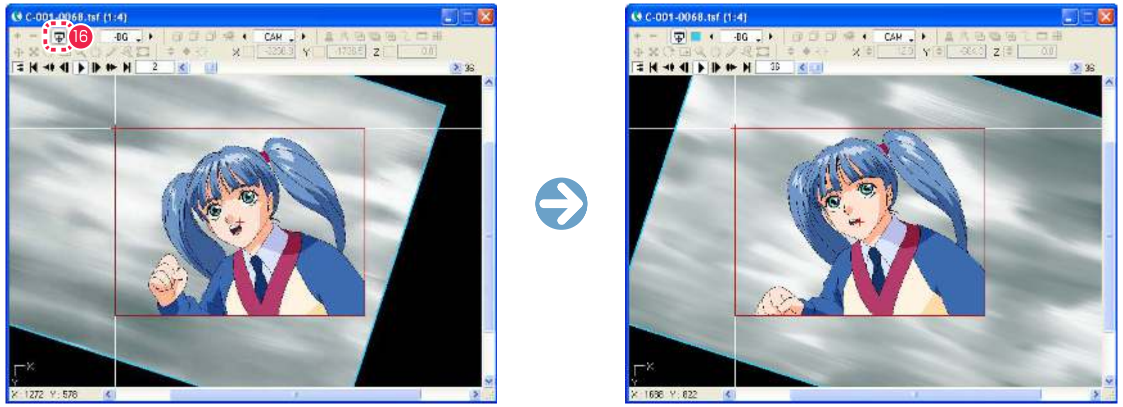
Deceleration: 0 Angle...

☐ Same Cel Values -BG 0.5

⑭ In the situation where all the frames of the [-BG] layer are still selected, click the yellow [Auto Inbetweening] button, one of the items in the [Inbetweening] palette, to set it to the "On" condition.


C-001-0068.tsf (1280 * 960 p...
-3384.00
CAM
-BG
A
P Position X
P Position X
Cel Number
⑮
1 of 36 Frames
Unit: pixel
View: Standard Size

⑮ The section between the 2 key frames changes to yellow [Auto Inbetweening Section], and becomes filled with the numbers for the [Follow] inbetweening.

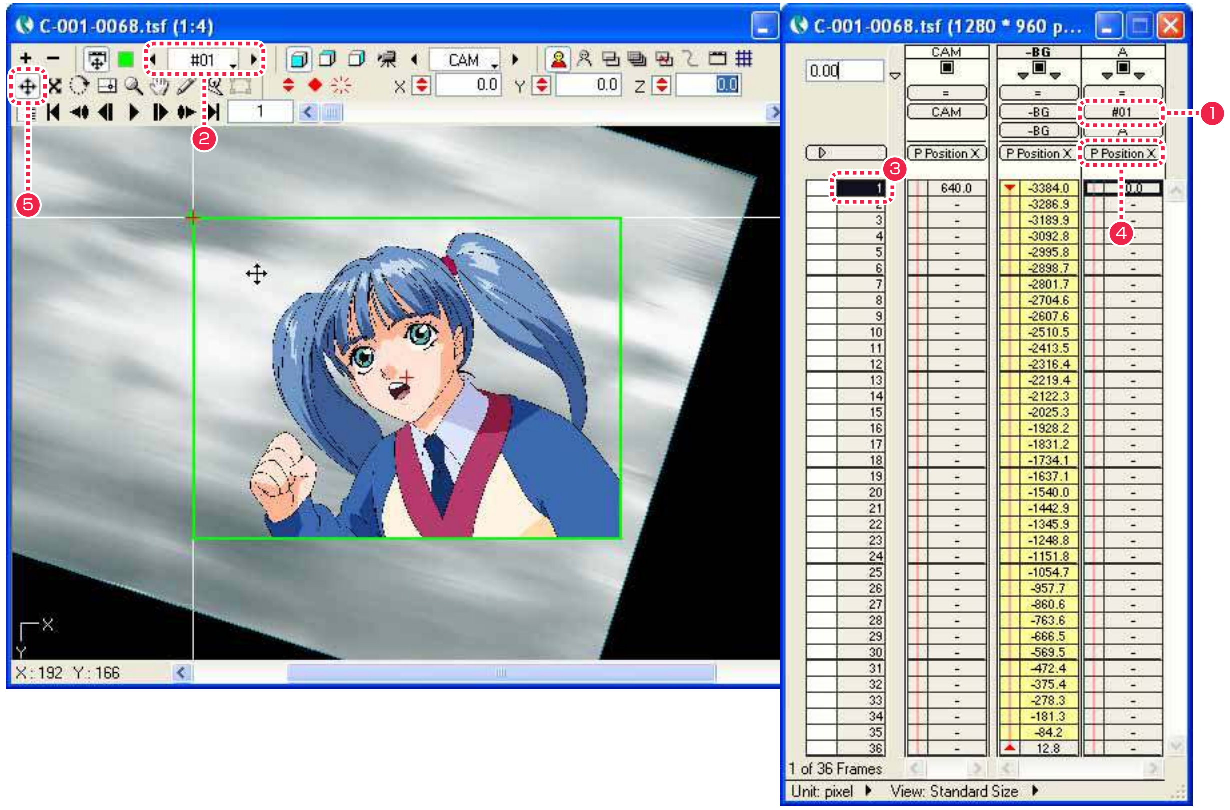


⑯ Confirm the flow of the background using the [Play/Stop] buttons in the [Stage] window.

08 Carrying out the SL (slide)

Slide In (SL) shooting of the [A] cel will be carried out.

1. Setting the slide in position (key frame)



	CAM	-BG	A
	CAM	-BG	#01
		-BG	A
	P Position X	P Position X	P Position X
1	640.0	-3384.0	0.0
2	-	-3286.9	-
3	-	-3189.9	-
4	-	-3092.8	-
5	-	-2995.8	-
6	-	-2898.7	-
7	-	-2801.7	-
8	-	-2704.6	-
9	-	-2607.6	-
10	-	-2510.5	-
11	-	-2413.5	-
12	-	-2316.4	-
13	-	-2219.4	-
14	-	-2122.3	-
15	-	-2025.3	-
16	-	-1928.2	-
17	-	-1831.2	-
18	-	-1734.1	-
19	-	-1637.1	-
20	-	-1540.0	-
21	-	-1442.9	-
22	-	-1345.9	-
23	-	-1248.8	-
24	-	-1151.8	-
25	-	-1054.7	-
26	-	-957.7	-
27	-	-860.6	-
28	-	-763.6	-
29	-	-666.5	-
30	-	-569.5	-
31	-	-472.4	-
32	-	-375.4	-
33	-	-278.3	-
34	-	-181.3	-
35	-	-84.2	-
36	-	12.8	-

1 of 36 Frames

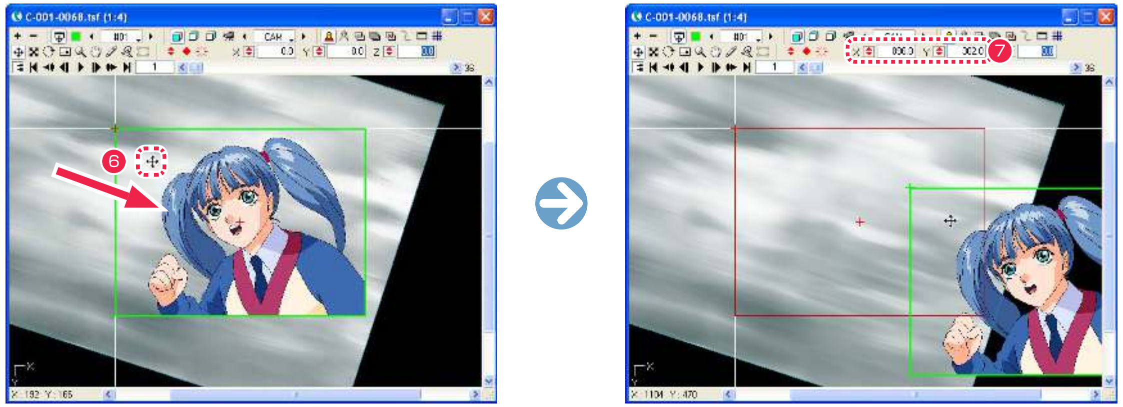
① Confirm that the [A] layer is connected to the [#01] pegbar.

② Using the [Stage] window [Select Pegbar/Layer] menu, switch to the [#01] pegbar that operates the [A] layer.

③ Click here to return the [Current Layer] to the 1st Frame.

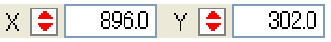
④ Switch the [Input Parameter Selection] menu to [P Position X].

⑤ Select the [Move] tool in the [Stage] window.



⑥ Drag the [A] cel to move it to the sliding start position.

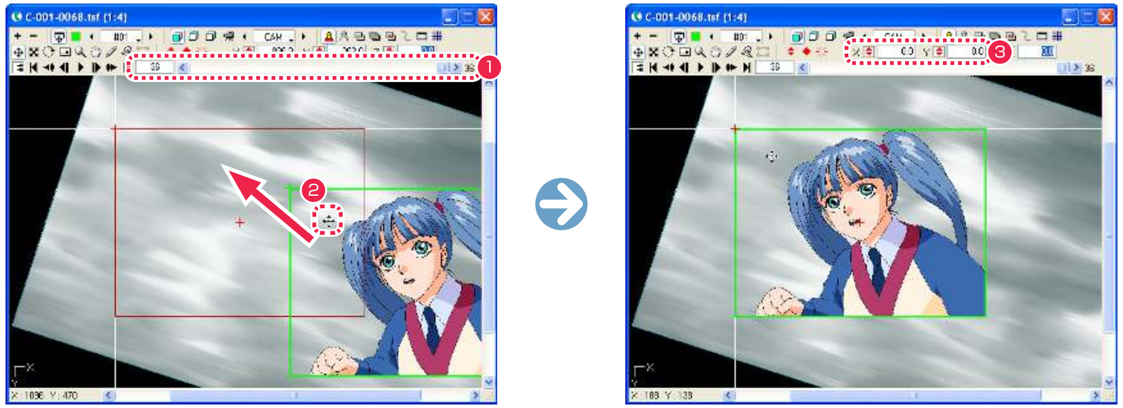
⑦ It is also possible to input the values from each of the [X] and [Y] fields. To recreate the example, input the following figures:



X 896.0 Y 302.0

[P Position X] [P Position Y]

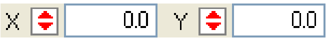
2. Setting the slide stop position (key frame)



① Drag the [Stage] window [Frame Slider] to its right end so that the last frame of the scene can be edited.

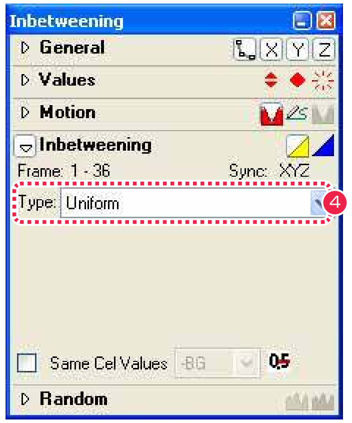
② With the [Move] tool still selected, drag the [A] cel to move it to its last shooting position (in the example, this is set to the origin).

③ It is also possible to input the numbers from each of the [X] and [Y] fields. To recreate the example, input the following figures:



X 0.0 Y 0.0

[P Position X] [P Position Y]



Inbetweening

▷ General

▷ Values

▷ Motion

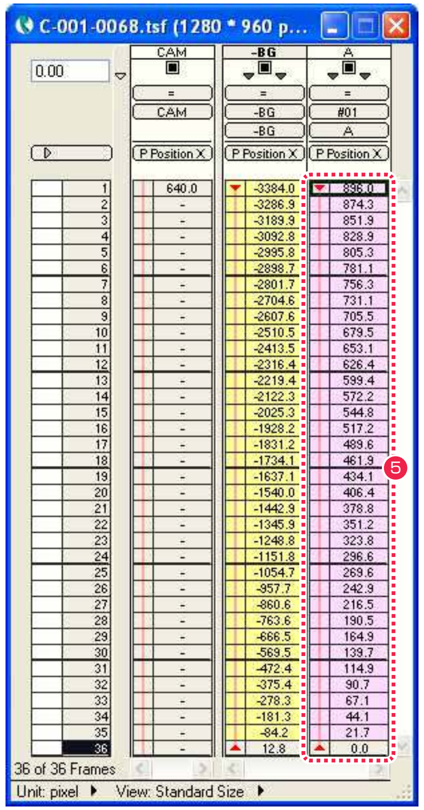
▽ Inbetweening

Frame: 1 - 36 Sync: XYZ

Type: Uniform

☐ Same Cel Values -BG 0.5

▷ Random



C-001-0068.tsf (1280 * 960 p...

0.00

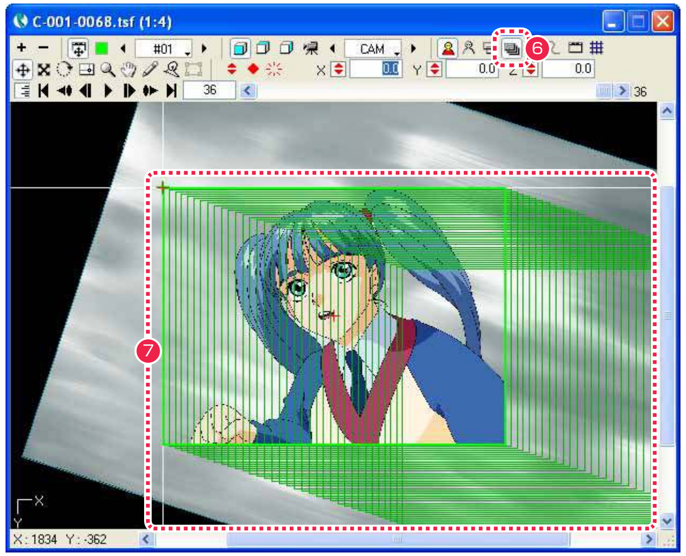
	CAM	-BG	A
	CAM	-BG -BG	#01 A
	P Position X	P Position X	P Position X
1	640.0	-3384.0	896.0
2	-	-3286.9	874.3
3	-	-3189.9	851.9
4	-	-3092.8	828.9
5	-	-2995.8	805.3
6	-	-2898.7	781.1
7	-	-2801.7	756.3
8	-	-2704.6	731.1
9	-	-2607.6	705.5
10	-	-2510.5	679.5
11	-	-2413.5	653.1
12	-	-2316.4	626.4
13	-	-2219.4	599.4
14	-	-2122.3	572.2
15	-	-2025.3	544.8
16	-	-1928.2	517.2
17	-	-1831.2	489.6
18	-	-1734.1	461.9
19	-	-1637.1	434.1
20	-	-1540.0	406.4
21	-	-1442.9	378.8
22	-	-1345.9	351.2
23	-	-1248.8	323.8
24	-	-1151.8	296.6
25	-	-1054.7	269.6
26	-	-957.7	242.9
27	-	-860.6	216.5
28	-	-763.6	190.5
29	-	-666.5	164.9
30	-	-569.5	139.7
31	-	-472.4	114.9
32	-	-375.4	90.7
33	-	-278.3	67.1
34	-	-181.3	44.1
35	-	-84.2	21.7
36	-	12.8	0.0

36 of 36 Frames

Unit: pixel View: Standard Size

④ Confirm [Uniform] as the [Inbetweening] [Type] item from the [Inbetweening] palette.

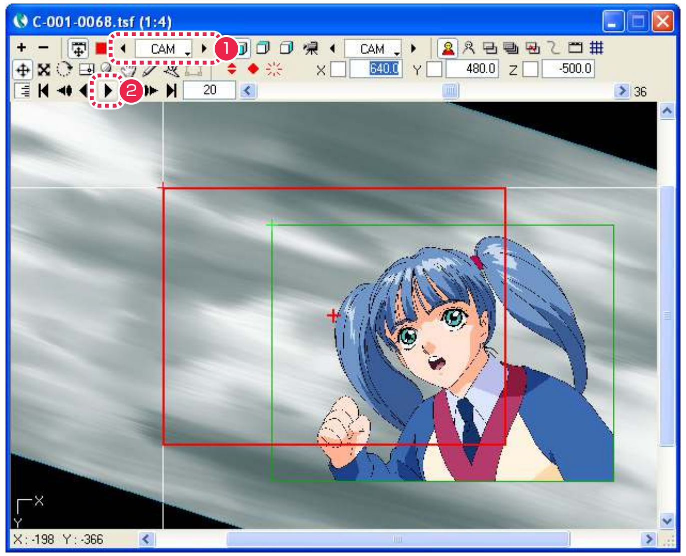
⑤ Looking at the X-sheet, it can be seen that the parameters of the [A] cel [P Position X] and [P Position Y] have been automatically set to [Uniform] inbetweening.



⑥ Click the [Stage] window [All Frames] button to set it to the "On" condition.

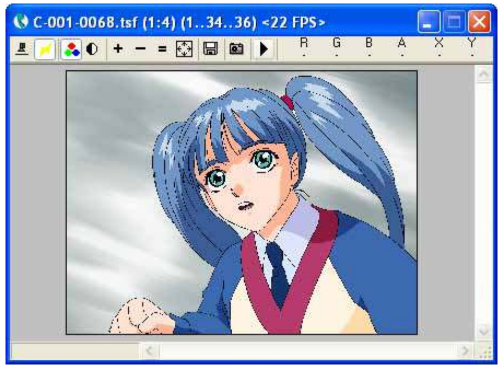
⑦ All of the frames of the [A] layer will be shown together, and it will be possible to confirm that the inbetweening has been correctly carried out. Clicking [All Frames] once more to set it to the "Off" condition will clear the all frames display.

3. Confirming the movement



① Switch the [Stage] window [Select Pegbar/Layer] menu to the [CAM] layer to show the range that will be captured by the camera as a red border.

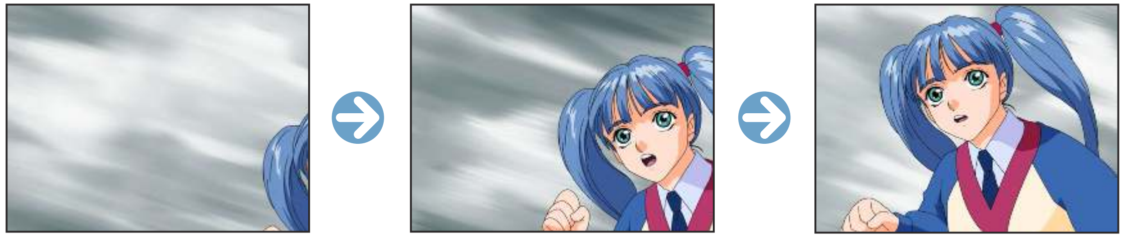
② Click the [Stage] window [Play/Stop] button to confirm the flow of the background.



In the situation where the actual camera movement is to be confirmed, select [RAM Preview] -> [Apply] from the [File] menu to begin looped playback in the [Rendering] window.
To stop the playback, click the [Esc] key.

09 Confirming the finished animation

Export the finished scene as a movie file and confirm the animation.



Be sure to remember to save the [Shooting X-sheet file] (*.tsf) of the finished work.

Chapter

4

Application description: shooting

In this chapter, an explanation is given about shooting.

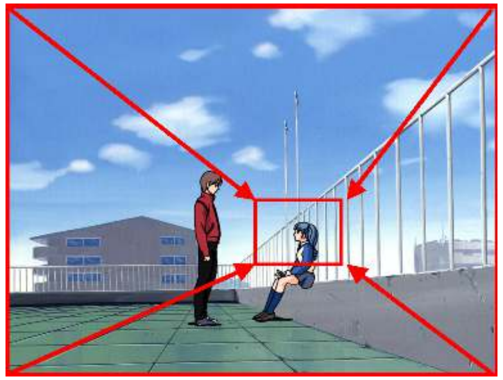
- Step:01 About shooting
- Step:02 Key frames
- Step:03 Inbetweening
- Step:04 Auto refresh
- Step:05 Offsets
- Step:06 Anchor frame and margins
- Step:07 Mask modes
- Step:08 Compositing modes
- Step:09 Smoothing
- Step:10 3D camera work
- Step:11 Color planes
- Step:12 Seeds

Step: 01

About shooting

In this step, an explanation is given about shooting in CoreRETAS HD.

The sliding, enlarging, reducing and rotating of [Cels] and backgrounds arranged on the [Stage] used by CoreRETAS HD to give the images movement is known as camera work.
For example, when a cel position is given a continuous movement, this will become the camera work known as [Slide], while continuously increasing the camera enlargement rate will realize [T.U. (Track Up)].



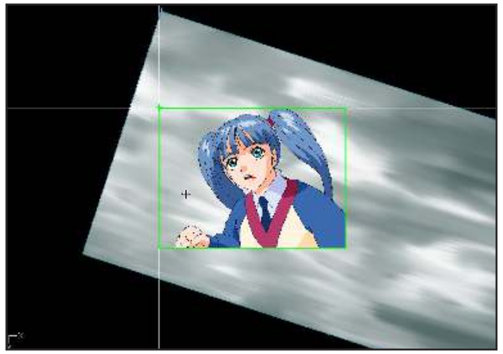
T.U. (Track Up)

In order to carry out the desired camera work, the continuous changing of the various parameters including [Coordinates], [Rotation Angle], and [Transparency] is known as [Inbetweening] the parameters.

However, because it is extremely troublesome for users to manually calculate and input the parameters for each frame, normally three pieces of information, the [First Parameters], [Last Parameters], and [Inbetweening Mode] are applied in CoreRETAS HD to allow automatic calculation of the intervening parameters.

These [First Parameters] and [Last Parameters], representing the movement starting and movement finishing points, are known as [Key Frame].

The camera work in CoreRETAS HD therefore consists of setting the two [Key Frames] and the [Inbetweening] between these points.



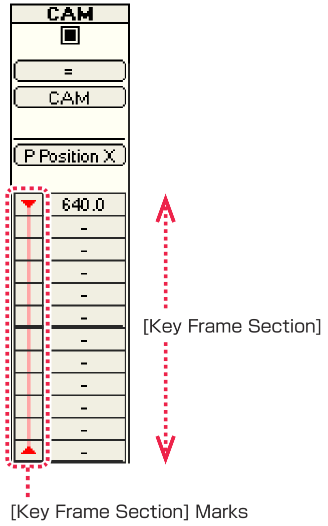
Step: 02

Key frames

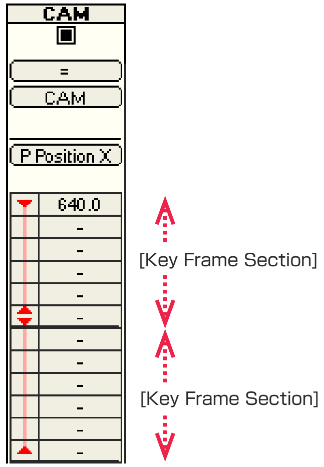
In this step, an explanation is given about key frames.

Key frame sections

The section contained between two key frames is called the [Key Frame Section].


CAM
=
CAM
P Position X
640.0
[Key Frame Section]
[Key Frame Section] Marks

In the situation where there are three key frames, the [Key Frame Sections] are considered as two separate sections.


CAM
=
CAM
P Position X
640.0
[Key Frame Section]
[Key Frame Section]

Two [Key Frame Sections] made up from three key frames.

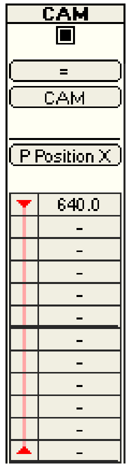
Types of key frame sections

[Key Frame Sections] are classified into the following five types.
For all [Key Frame Sections] except for [Manual Sections], the [Type] of inbetweening is recorded.

Manual Sections

If [Key Frame Sections] are selected and inbetweening is not manually implemented, inbetweening will not be applied.
The [Data Cells] will be shown in "gray".

Further, the [Type] of inbetweening carried out cannot be recorded in the [Key Frame Section].


CAM
=
CAM
P Position X
640.0

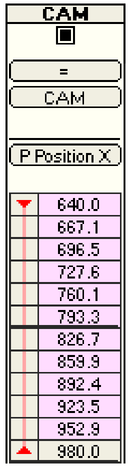
Splined Sections

[Splined Inbetweening] will be conducted throughout the [Key Frame Section].
The [Data Cells] will be shown in "pink".

Because the inbetweening result when used between two key frames will be the same as for [Auto Inbetweening Sections], this is mainly used for inbetweening between three or more frames.

When the key frame parameters are changed, inbetweening of the [Key Frame Sections] will be automatically reapplied according to the [Type] of inbetweening set.

(Concerning the types of inbetweening, refer to [Inbetweening] in this chapter)

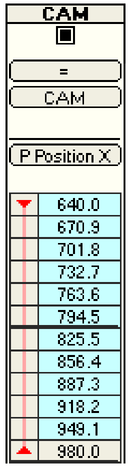

CAM
=
CAM
P Position X
640.0
667.1
696.5
727.6
760.1
793.3
826.7
859.9
892.4
923.5
952.9
980.0

Motion Path Sections

Inbetweening will be conducted throughout the [Key Frame Section] following the [Motion Path].
The [Data Cells] will be shown in "light blue".

When the key frame parameters are changed, inbetweening of the [Key Frame Sections] will be automatically reapplied according to the [Type] of inbetweening set.

(Concerning the types of inbetweening, refer to [Inbetweening] in this chapter)



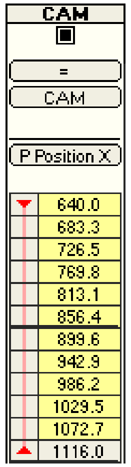
640.0
670.9
701.8
732.7
763.6
794.5
825.5
856.4
887.3
918.2
949.1
980.0

Auto Inbetweening Sections

The [Data Cells] will be shown in "yellow".

When the key frame parameters are changed, inbetweening of the [Key Frame Sections] will be automatically reapplied according to the [Type] of inbetweening set.

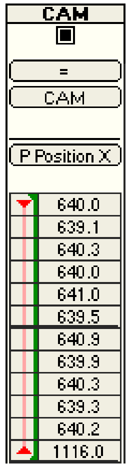
(Concerning the types of inbetweening, refer to [Inbetweening] in this chapter)



640.0
683.3
726.5
769.8
813.1
856.4
899.6
942.9
986.2
1029.5
1072.7
1116.0

Random Sections

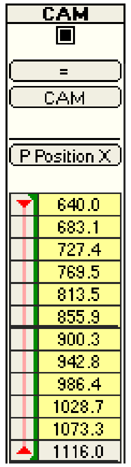
[Instability] will be applied to the parameters based on random numbers.
A "green" line will be shown in the [Key Frame View Area].



640.0
639.1
640.3
640.0
641.0
639.5
640.9
639.9
640.3
639.3
640.2
1116.0

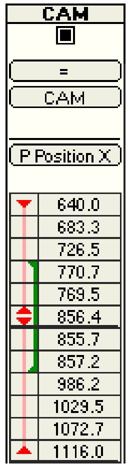
It is also possible to set [Random Sections] to overlap with other [Manual Sections], [Splined Sections], [Motion Path Sections], and [Auto Inbetweening Sections].

Further, Random Sections can be set whether or not there are key frames.



640.0
683.1
727.4
769.5
813.5
855.9
900.3
942.8
986.4
1028.7
1073.3
1116.0

[Auto Inbetweening Section]
+ [Random Section]



640.0
683.3
726.5
770.7
769.5
856.4
855.7
857.2
986.2
1029.5
1072.7
1116.0

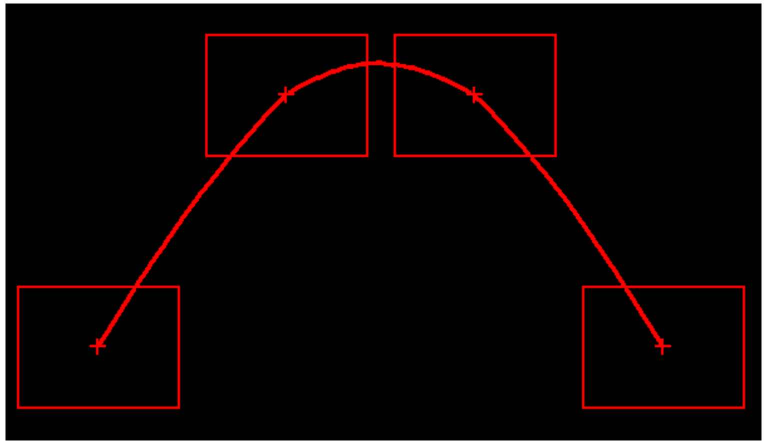
[Random Section] straddling
[Key Frames]

Continuous key frames and non-continuous key frames

There are 2 types of key frames: [Continuous Key Frames] and [Non-continuous Key Frames].
The difference between [Continuous Key Frames] and [Non-continuous Key Frames] becomes apparent when inbetweening is conducted between three or more key frames. When there are only two key frames, the result is the same whichever key frame is used.

Continuous key frames

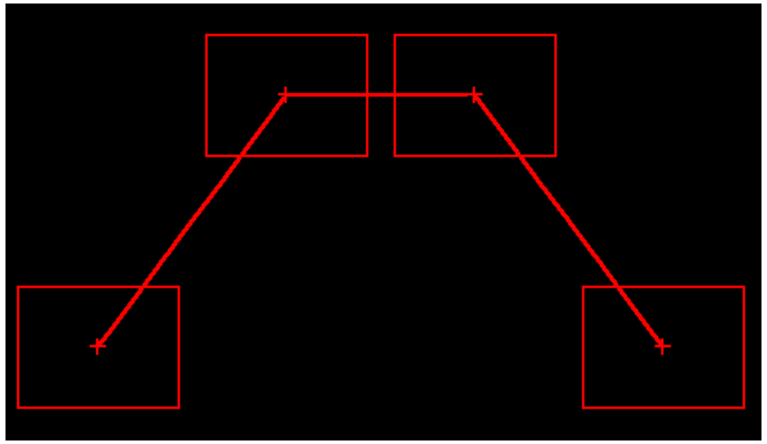
In [Continuous Key Frames], inbetweening is carried out as one unified section in combination with the previous and following key frames. The track of the inbetweening forms a smooth curve through the key frames.



Track made with [Non-continuous] -> [Continuous] -> [Continuous] -> [Non-continuous] inbetweening.

Non-continuous key frames

In [Non-continuous Key Frames], inbetweening is carried out separately for the previous and following sections with the key frames as boundaries. The track of the inbetweening consists of straight lines linking the key frames.



Track made with [Non-continuous] -> [Non-continuous] -> [Non-continuous] -> [Non-continuous] inbetweening.

Even when [Continuous Key Frames] have been set, if there are more than three key frames in the selected range (two or more key frame sections), separate [Accelerations] will be applied to each section by the inbetweening.
In this kind of situation, if manual setting is made (without setting splined sections), inbetweening will be carried out with a single acceleration throughout.

(For more details, see [Inbetweening between Three or More Key Frames] in [Inbetweening] in this chapter)

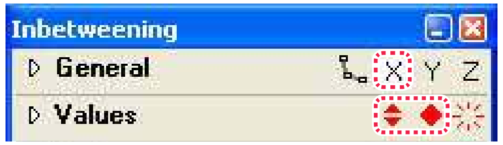
POINT

About inbetweening

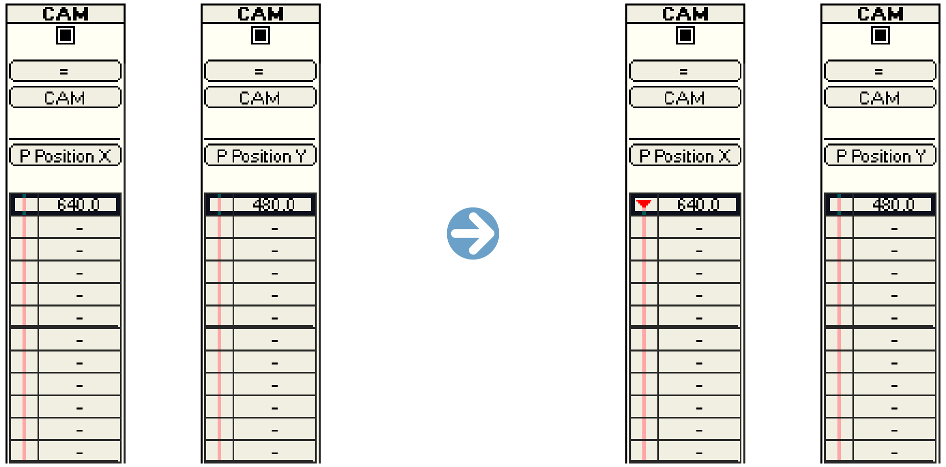
[Inbetweening] is the smooth interpolation between two key frames. For more details about [Inbetweening], see [Inbetweening] in this chapter.

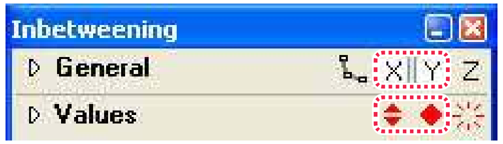
Key frame setting of X-axis only and Y-axis only

Method using the [General] pane of the [Inbetweening] palette

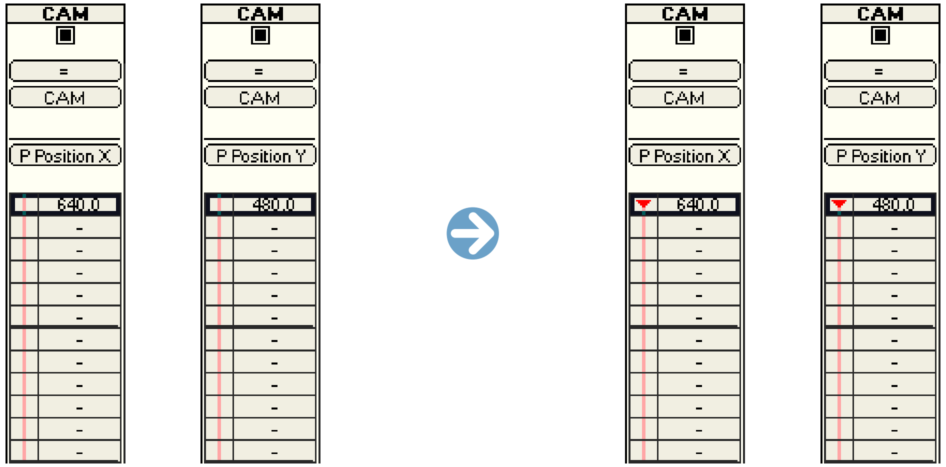

Inbetweening
General
X Y Z
Values

In the [General] pane of the [Inbetweening] palette, if a [Key Frame] button is clicked when only [X] is set to the "On" condition, the key frame will only be attached to the [P Position X].

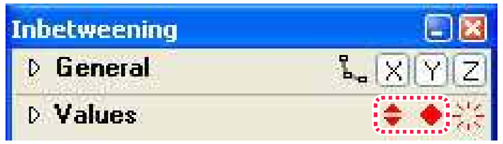

CAM
=
CAM
P Position X
640.0
CAM
=
CAM
P Position Y
480.0
CAM
=
CAM
P Position X
640.0
CAM
=
CAM
P Position Y
480.0


Inbetweening
General
X Y Z
Values

In the [General] pane of the [Inbetweening] palette, if a [Key Frame] button is clicked when [X] and [Y] are set to the "On" condition, the key frame will be attached to the [P Position X] and [P Position Y].


CAM
=
CAM
P Position X
640.0
CAM
=
CAM
P Position Y
480.0
CAM
=
CAM
P Position X
640.0
CAM
=
CAM
P Position Y
480.0

Method using the [Shift] key

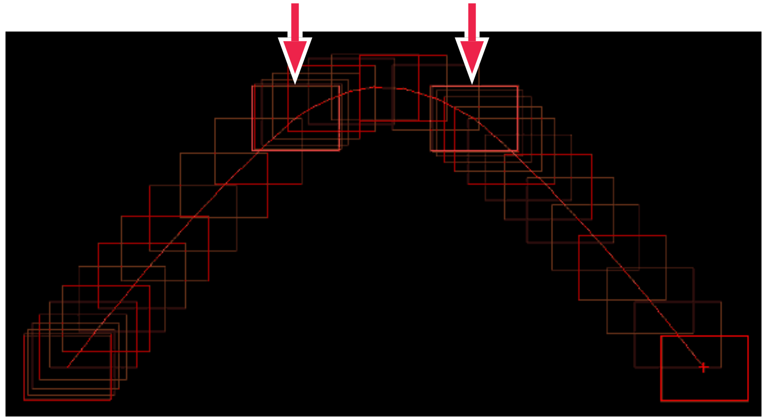

Inbetweening
General
X Y Z
Values

If an [Inbetweening] palette [Key Frame] button is clicked while pressing the [Shift] key ([Shift] + [Click]), the key frame will be attached only to the currently displayed parameters of the [X-sheet] window [Current Layer], regardless of the inbetweening palette [General] pane condition.

Inbetweening between three or more key frames

Even when [Continuous Key Frames] have been set, if there are more than three key frames in the selected range (two or more key frame sections), separate [Accelerations] will be applied to each section by the inbetweening.
This specification is implemented to prevent the coordinates of the key frames from being changed due to the inbetweening.

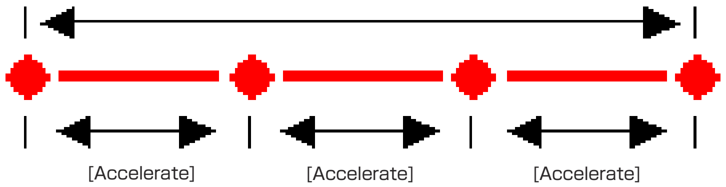
[Continuous Key Frames]



Overall Inbetweening using [Accelerate]

In the situation where the range is divided into three [Key Frame Sections], even if all frames are selected and inbetweening is applied using [Accelerate], inbetweening will be applied to each of the [Key Frame Sections] using [Accelerate], and overall acceleration inbetweening will not be applied.

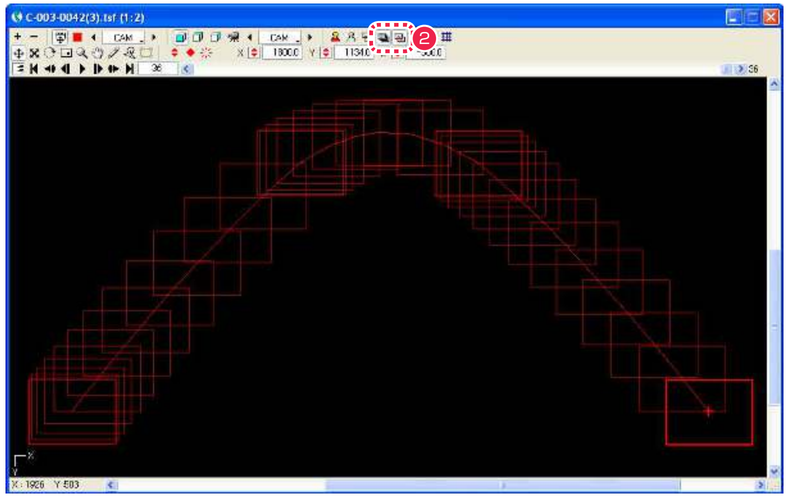
(Overall Selection)



When there are three or more key frames (two or more key frame sections) and overall inbetweening is to be applied, it should be carried out using the following procedure.

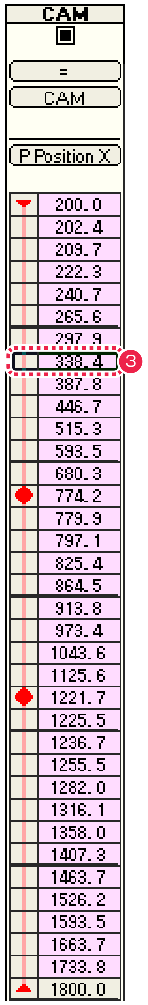
Linking continuous key frames using motion path

An explanation is given using the example of [Accelerate] of the method of applying acceleration inbetweening throughout [Continuous Key Frames] without separating the sections.

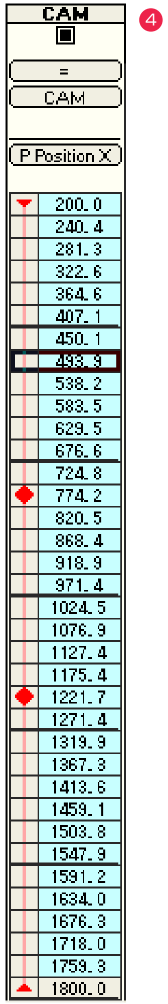


① Set three or more key frames and apply inbetweening.
(At this time, even if acceleration is applied, it will be applied separately to each section)

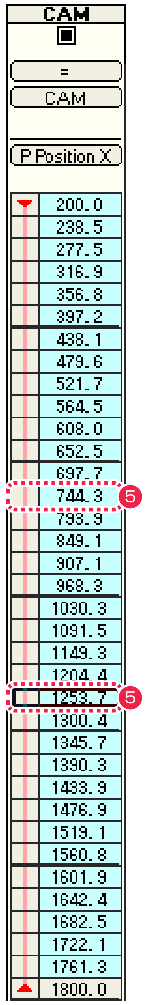
② Set the [Stage] window [All Frames] button and [Frame Track] button to the "On" condition to show the frame track.



CAM CAM P Position X
200.0
202.4
209.7
222.3
240.7
265.6
297.9
338.4
387.8
446.7
515.3
593.5
680.3
774.2
779.9
797.1
825.4
864.5
913.8
973.4
1043.6
1125.6
1221.7
1225.5
1236.7
1255.5
1282.0
1316.1
1358.0
1407.3
1463.7
1526.2
1593.5
1663.7
1733.8
1800.0



CAM CAM P Position X
200.0
240.4
281.3
322.6
364.6
407.1
450.1
493.9
538.2
583.5
629.5
676.6
724.8
774.2
820.5
868.4
918.9
971.4
1024.5
1076.9
1127.4
1175.4
1221.7
1271.4
1319.9
1367.3
1413.6
1459.1
1503.8
1547.9
1591.2
1634.0
1676.3
1718.0
1759.3
1800.0

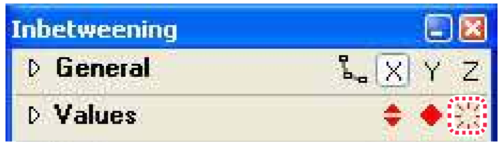


CAM CAM P Position X
200.0
238.5
277.5
316.9
356.8
397.2
438.1
479.6
521.7
564.5
608.0
652.5
697.7
744.3
793.9
849.1
907.1
968.3
1030.3
1091.5
1149.3
1204.4
1253.7
1300.4
1345.7
1390.3
1433.9
1476.9
1519.1
1560.8
1601.9
1642.4
1682.5
1722.1
1761.3
1800.0

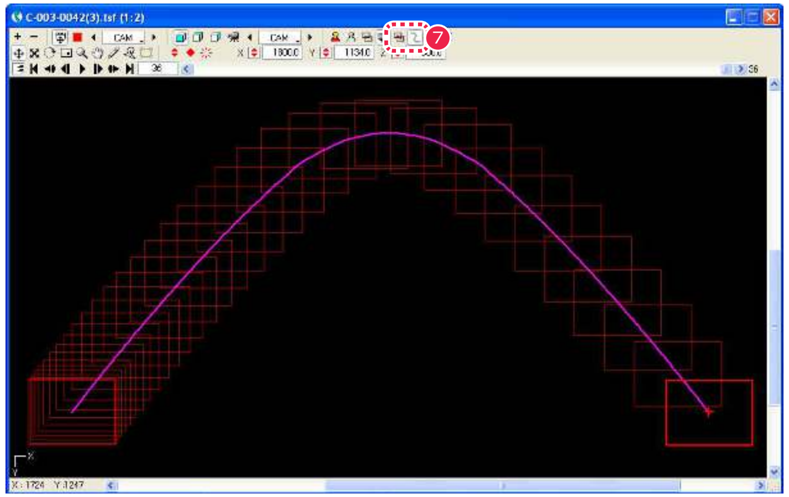
③ In the [X-sheet] window, select any one [Data Cell] of the inbetweened pegbar.

④ Select [Create Motion Path from Key Frames] from the [X-sheet] menu to convert the selected pegbar inbetweening to [Motion Path Sections]. Inbetweening will be re-applied at [Uniform] speed to each key frame.

⑤ Select the [Data Cells] of the key frames located in between the [Motion Path Sections] and delete these key frames using the [Delete Key Frame] button in the [Inbetweening] palette.
This will leave one [Motion Path Section] that links the start and finish points.



[Delete Key Frame] button



⑥ In the situation where any one of the data cells of the X-sheet [Motion Path Section] is still selected, select [Accelerate] from the [Inbetweening] palette to apply [Accelerate] inbetweening to the whole motion path.

⑦ Setting the [Stage] window [Frame Track] button to "Off" and the [Motion Path] button to "On" will allow confirmation of the motion path track.

Step: 03

Inbetweening

In this step, an explanation is given about inbetweening.

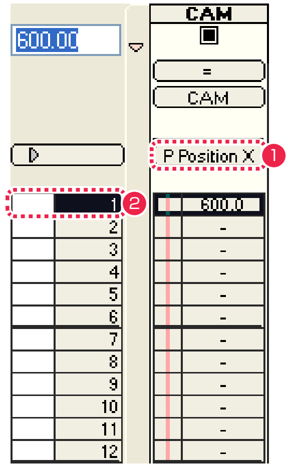
Manual inbetweening and auto inbetweening

Although inbetweening is the smooth interpolation of parameters between two key frames, what happens when the key frame parameters are changed after inbetweening has been carried out?
The result will differ according to whether [Manual Inbetweening] or [Auto Inbetweening] (including [Spline] and [Motion Path]) is used.

Manual inbetweening

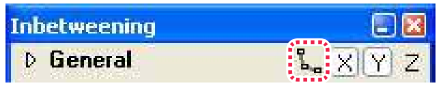
[Manual Inbetweening] is the inbetweening mode when the [Key Frame Sections] have been set to [Manual Sections].

1. Basic procedures

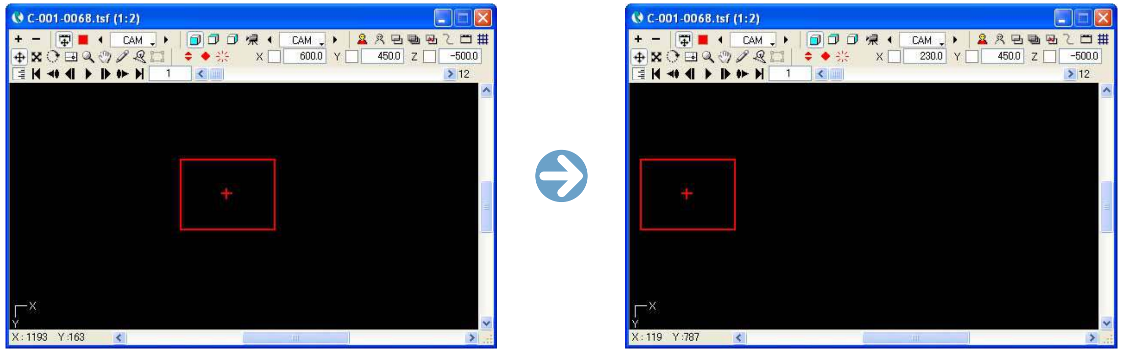


① Set the X-sheet [Input Parameter Selection] menu to show [P Position X].

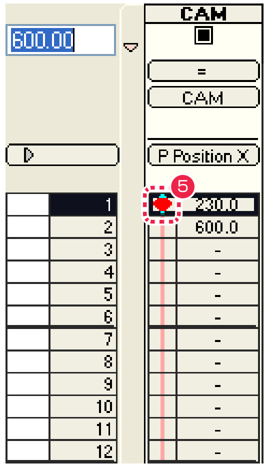
② Set the [Current Frame] to the 1st Frame.



③ Set the [Auto Refresh] button of the [Inbetweening] palette to the "Off" condition.

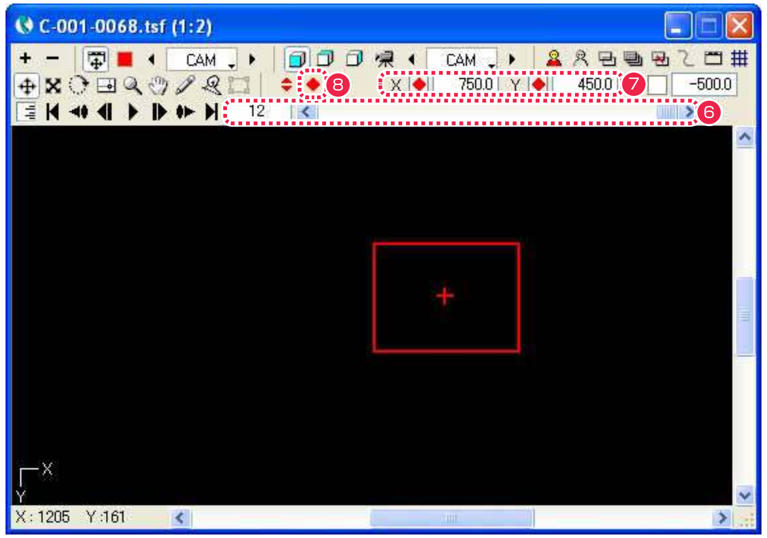


④ Change the position of the [CAM] pegbar.



⑤ Click the [Continuous Key Frame Setting] button of the [Inbetweening] palette to set [Continuous Key Frame] to the 1st Frame.

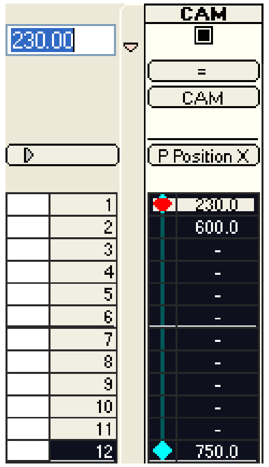
When the [Auto Refresh] button is set to "Off", even if the 1st Frame parameters are changed, the parameters of the 2nd and subsequent frames will remain the same.


C-001-0068.tsf (1:2)
CAM
CAM
X
750.0
Y
450.0
-500.0
12
⑥
⑦
⑧
X : 1205 Y :161

⑥ Operate the slider of the [Stage] window or input values to change the [Current Frame] to the 12th Frame.

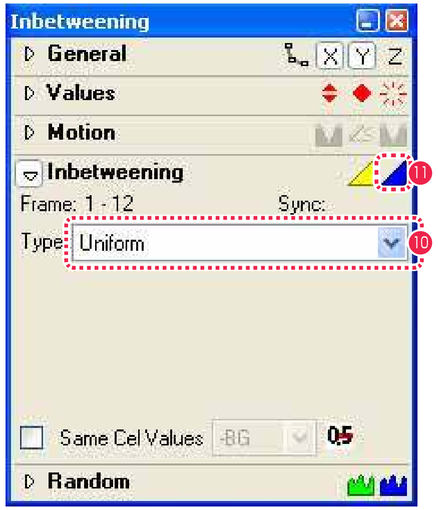
⑦ Change the [CAM] pegbar position.

⑧ Click the [Continuous Key Frame Setting] button to set [Continuous Key Frame] to the 12th Frame.


230.00
CAM
=
CAM
P Position X

	CAM P Position X
1	230.0
2	600.0
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	750.0

⑨ Set the [Key Frame Section] (1st to 12th Frames) to the selected condition.
(If any of the [Data Cells] of the [Key Frame Section] are not selected, it will not be possible to carry out inbetweening)

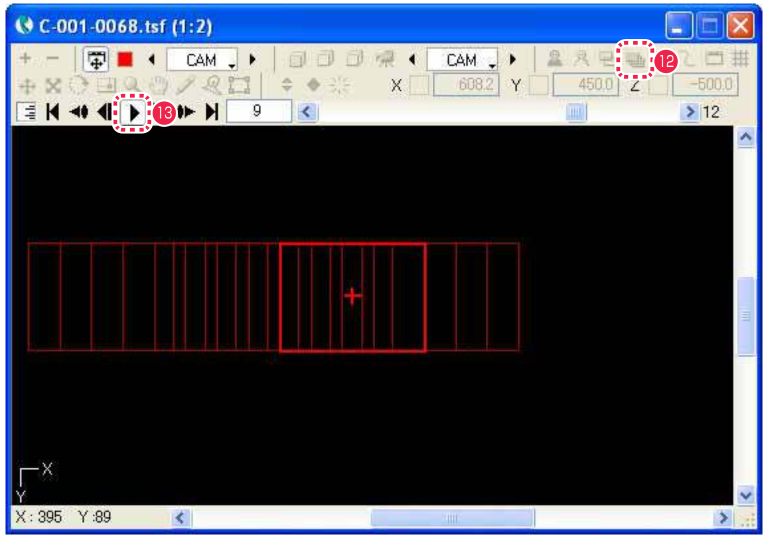

Inbetweening
General
X
Y
Z
Values
Motion
Inbetweening
Sync:
Same Cel Values
BG
0.5
Random
⑪
⑩

Frame: 1 - 12

Type: Uniform

⑩ Open the [Inbetweening] pane of the [Inbetweening] palette, and select the inbetweening [Type].
(In this example, [Uniform] speed is selected)

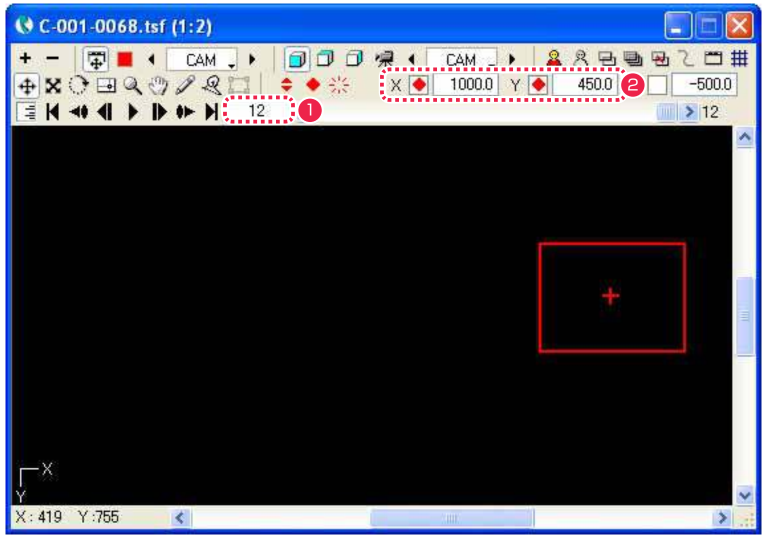
⑪ Click the [Apply Inbetweening] button. (Take care not to mistake this button with the [Auto Inbetweening] button)


C-001-0068.tsf (1:2)
CAM
CAM
X
608.2
Y
450.0
Z
-500.0
9
12
⑫
⑬
X : 395 Y :89

⑫ Clicking the [Stage] window [All Frames] button to set it to the "On" condition will allow confirmation of the [Pegbar] borders of all the frames on the stage.

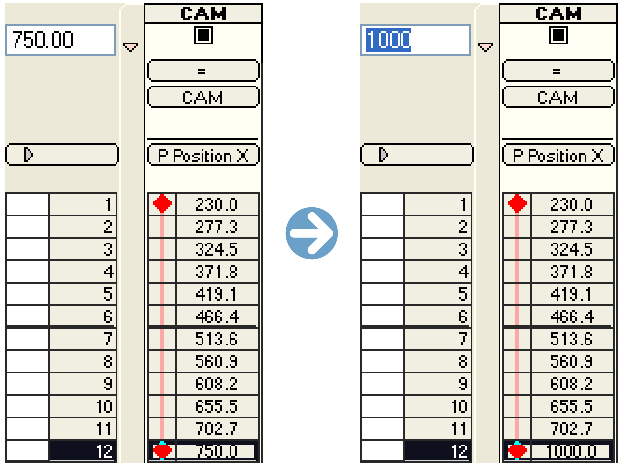
⑬ Click the [Play/Stop] button to confirm whether the inbetweening has been correctly implemented.

2. Changing the parameters after applying inbetweening using manual inbetweening


C-001-0068.tsf (1:2)
CAM
CAM
X 1000.0
Y 450.0
-500.0
12
①
②
X : 419 Y :755

① Confirm once again that the [Current Frame] is set as the 12th Frame.

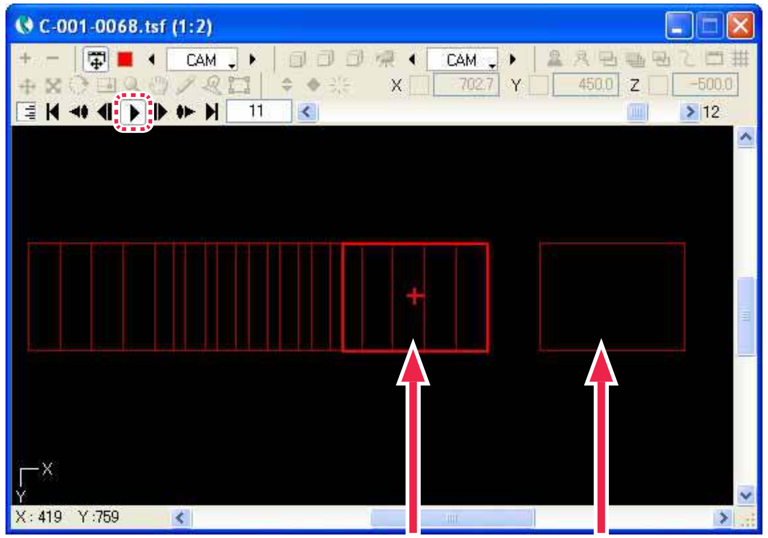
② Change the [CAM] pegbar position.


750.00
CAM
=
CAM
P Position X
1000
CAM
=
CAM
P Position X

	CAM P Position X
1	230.0
2	277.3
3	324.5
4	371.8
5	419.1
6	466.4
7	513.6
8	560.9
9	608.2
10	655.5
11	702.7
12	750.0

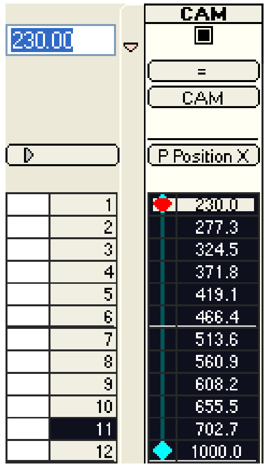
	CAM P Position X
1	230.0
2	277.3
3	324.5
4	371.8
5	419.1
6	466.4
7	513.6
8	560.9
9	608.2
10	655.5
11	702.7
12	1000.0

③ Looking at the X-sheet, it can be seen that even if the last key frame (12th Frame) parameter (P Position X) is changed, the parameters of the 1st to 11th frames will not change.


C-001-0068.tsf (1:2)
CAM
CAM
X 702.7
Y 450.0
Z -500.0
11
12
X : 419 Y :759

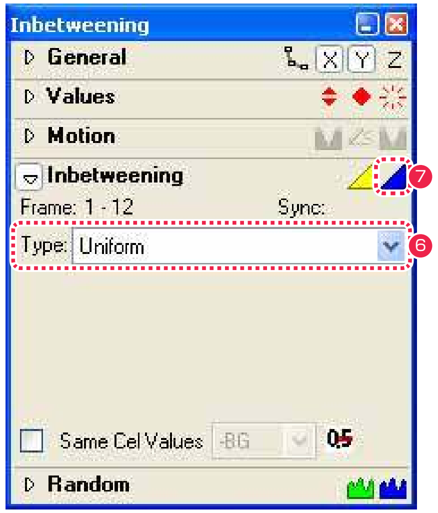
[11th Frame] [12th Frame]

④ Confirm the movement using the [Play/Stop] button.
At the point in time when the frame changes from the 11th Frame to the 12th Frame, there will be a jump in the position of the [CAM] pegbar frame.


230.00
CAM
=
CAM
P Position X

	CAM P Position X
1	230.0
2	277.3
3	324.5
4	371.8
5	419.1
6	466.4
7	513.6
8	560.9
9	608.2
10	655.5
11	702.7
12	1000.0

⑤ Once again, set the [Key Frame Section] (1st to 12th Frames) to the selected condition.



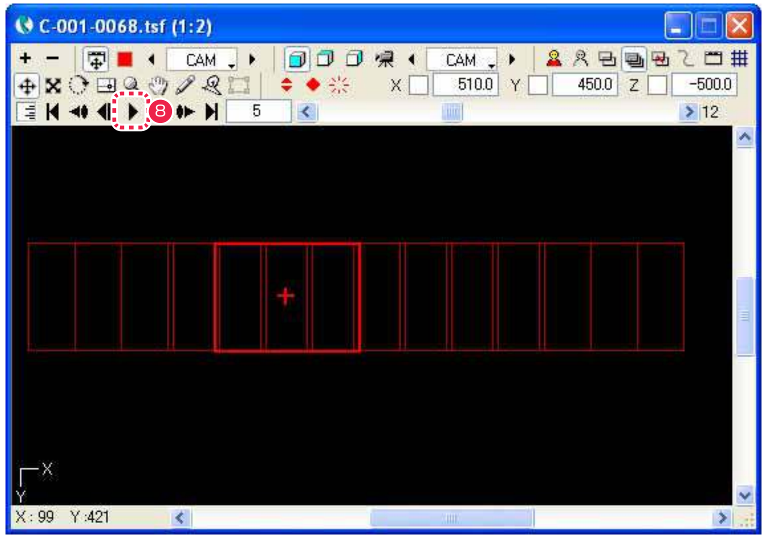
Frame: 1 - 12 Sync:

Type: Uniform

☐ Same Cel Values BG 05

⑥ Select the [Type] of inbetweening using the [Inbetweening] palette. ([Uniform] will also be selected this time)

⑦ Click the [Apply Inbetweening] button to apply the inbetweening.
(Take care not to mistake this button with the [Auto Inbetweening] button)



X 510.0 Y 450.0 Z -500.0

5

X : 99 Y :421

⑧ Using the [Play/Stop] button, confirm that the inbetweening has been correctly applied.

Summary of manual inbetweening

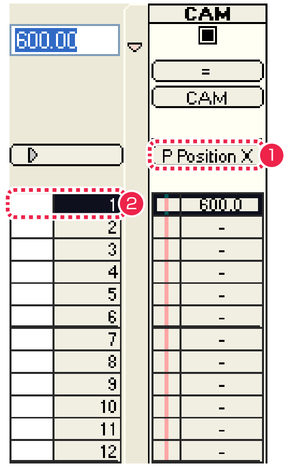
As shown above, using the mode in which [Manual Inbetweening] is carried out by pressing the [Apply Inbetweening] button without using [Auto Inbetweening] (including [Spline] and [Motion Path]) which will be explained later, detailed work can be carried out. However, each time the key frame parameters (such as the pegbar position) are changed, it will be necessary to re-apply the inbetweening.

(For an explanation of the types of inbetweening, see [Inbetweening] in this chapter)

Auto inbetweening

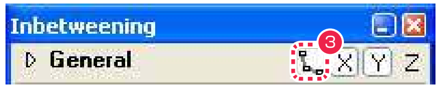
[Auto Inbetweening] is the inbetweening mode when the key frame settings are set to options other than [Manual Sections]

1. Basic procedures

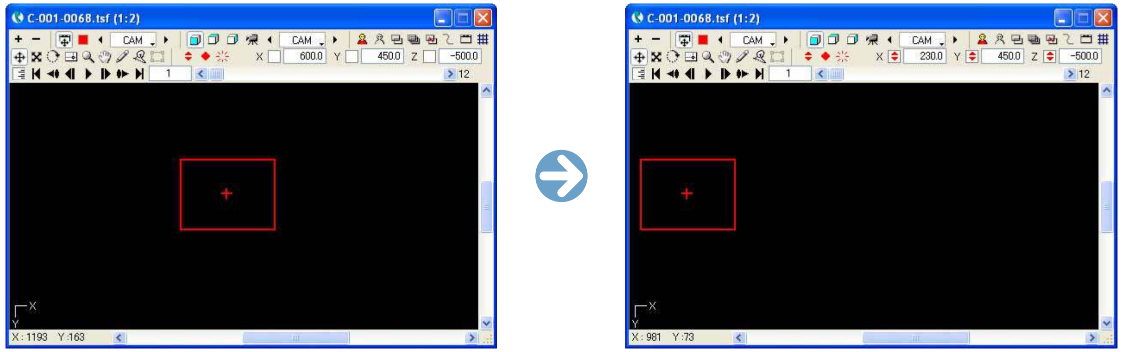

600.00
CAM
=
CAM
P Position X
①
②
1
2
3
4
5
6
7
8
9
10
11
12
600.0

① Set the X-sheet [Input Parameter Selection] menu to show [P Position X].

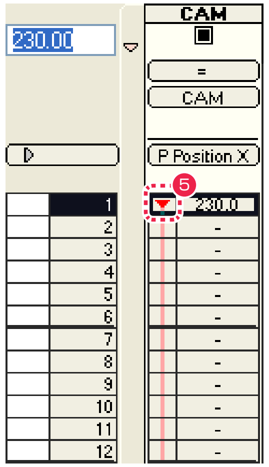
② Set the [Current Frame] to the 1st Frame.


Inbetweening
General
③
X
Y
Z

③ Set the [Auto Refresh] button of the [Inbetweening] palette to the "On" condition.

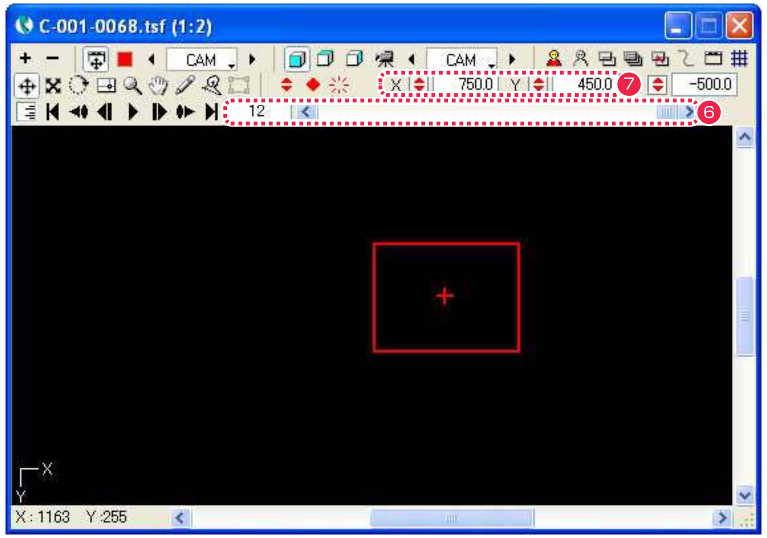

C-001-0068.tsf (1:2)
CAM
600.0
450.0
-500.0
X: 1193 Y: 163
C-001-0068.tsf (1:2)
CAM
230.0
450.0
-500.0
X: 981 Y: 73

④ Change the position of the [CAM] pegbar.


230.00
CAM
=
CAM
P Position X
⑤
1
2
3
4
5
6
7
8
9
10
11
12
230.0

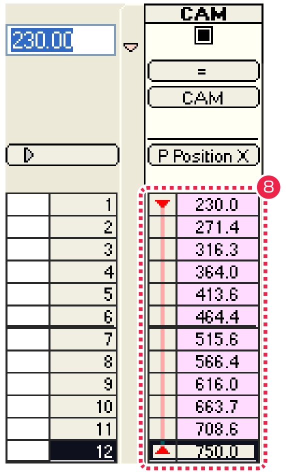
⑤ Changing the position will set a [Non-continuous Key Frame] to the 1st Frame.

When the [Auto Refresh] button is set to "On", if the 1st Frame parameters are changed, the parameters of the 2nd and subsequent frames will all be changed to the same values as the 1st Frame.


C-001-0068.tsf (1:2)
CAM
CAM
X 750.0
Y 450.0
-500.0
⑦
12
⑥
X : 1163 Y :255

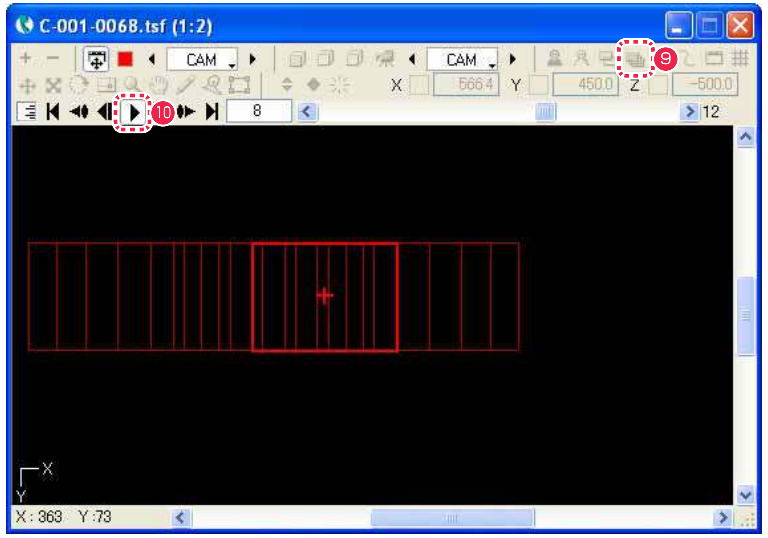
⑥Change the [Current Frame] to the 12th Frame.

⑦Change the [CAM] pegbar position.


230.00
CAM
=
CAM
P Position X
⑧

	P Position X
1	230.0
2	271.4
3	316.3
4	364.0
5	413.6
6	464.4
7	515.6
8	566.4
9	616.0
10	663.7
11	708.6
12	750.0

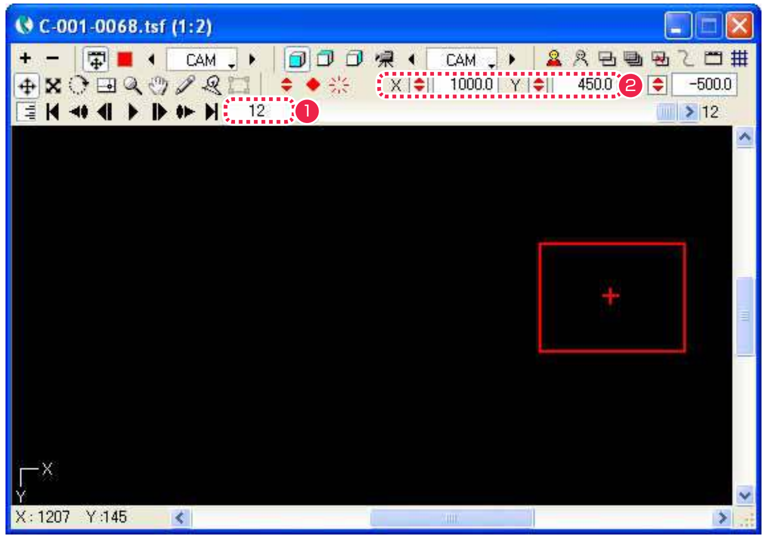
⑧Changing the position will set a [Non-continuous Key Frame] to the 12th Frame. At the same time, the [Key Frame Section] will become a [Splined Section], and inbetweening will be automatically applied. (Auto Inbetweening)


C-001-0068.tsf (1:2)
CAM
CAM
⑨
X 566.4
Y 450.0
Z -500.0
⑩
8
12
X : 363 Y :73

⑨Clicking the [Stage] window [All Frames] button to set it to the "On" condition will allow confirmation of the [Pegbar] borders of all the frames on the stage.

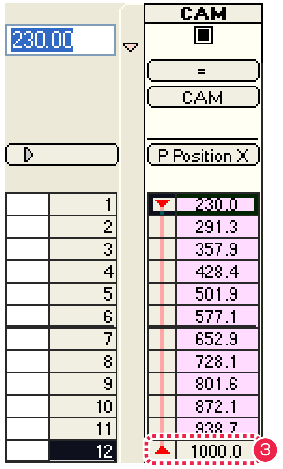
⑩Click the [Play/Stop] button to confirm whether the inbetweening has been correctly implemented.

2. Changing the parameters after applying inbetweening using auto inbetweening


C-001-0068.tsf (1:2)
CAM
CAM
X 1000.0 Y 450.0
-500.0
12
①
②
12
X : 1207 Y :145

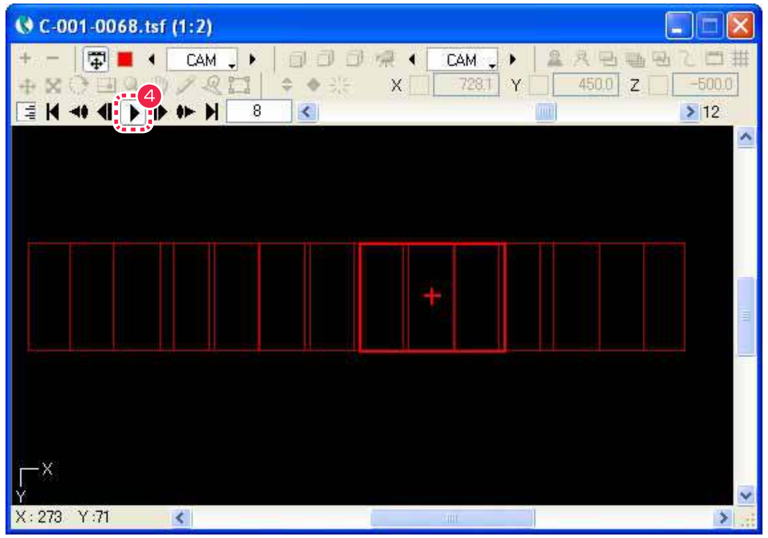
① Confirm once again that the [Current Frame] is set as the 12th Frame.

② Change the [CAM] pegbar position again.


230.00
CAM
=
CAM
P Position X
③

1	230.0
2	291.3
3	357.9
4	428.4
5	501.9
6	577.1
7	652.9
8	728.1
9	801.6
10	872.1
11	938.7
12	1000.0

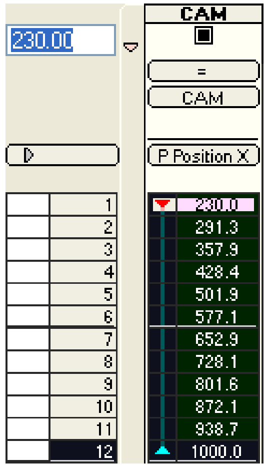
③ When the position is changed, the [Key Frame Section] will have its splined inbetweening re-applied.
As shown above, when the key frames are changed in [Auto Inbetweening], the inbetweening of the parameters of previous and following [Key Frame Sections] will be automatically re-applied by CoreRETAS HD.


C-001-0068.tsf (1:2)
CAM
CAM
X 728.1 Y 450.0 Z -500.0
④
8
12
X : 273 Y :71

④ Using the [Stage] window [Play/Stop] button, confirm the movement.
Since the [Key Frame Sections] will already have had the inbetweening re-applied, the playback will be smooth.

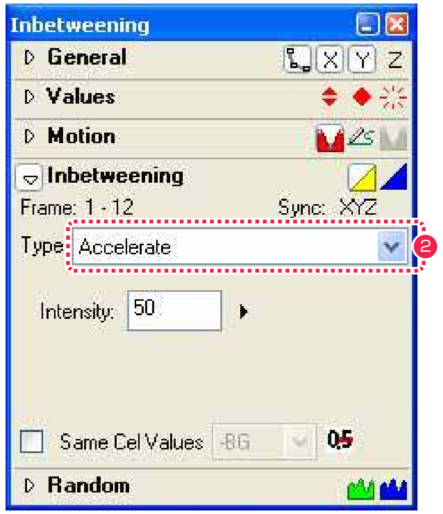
3. Changing the inbetweening

This time, the [CAM] pegbar inbetweening will be re-applied using [Accelerate].



	P Position X
1	230.0
2	291.3
3	357.9
4	428.4
5	501.9
6	577.1
7	652.9
8	728.1
9	801.6
10	872.1
11	938.7
12	1000.0

❶ Set the [Key Frame Section] (Splined Section) to the selected condition.



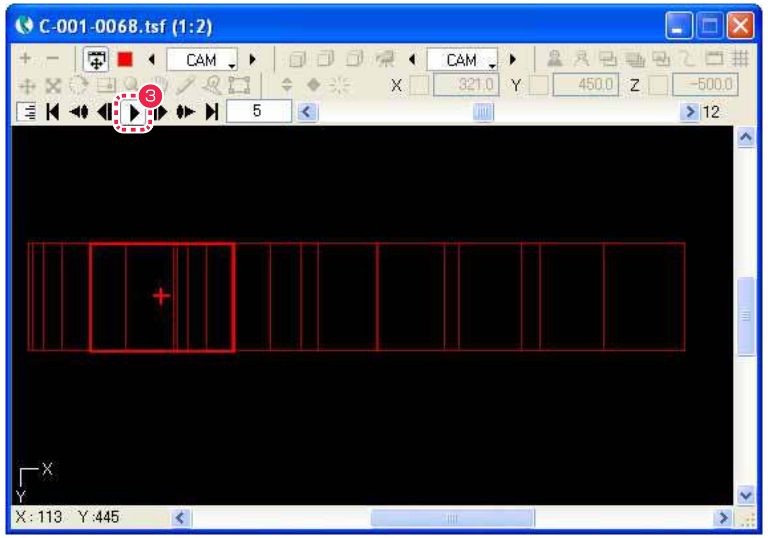
Frame: 1 - 12 Sync: XYZ

Type: Accelerate

Intensity: 50

☐ Same Cel Values BG 05

❷ In the [Inbetweening] palette, change the inbetweening [Type] to [Accelerate].



❸ Using the [Stage] window [Play/Stop] button, confirm that the inbetweening has been correctly applied.

4. Summary of auto inbetweening

As shown above, key frame sections set to [Auto Inbetweening Sections] (including [Splined Sections] and [Motion Path Sections]) have the following characteristics:

- When the key frame parameters are changed, inbetweening is automatically re-applied between the key frames.
- In the situation where a part of or all of the [Key Frame Sections] have been selected, changing the inbetweening [Type] menu will cause the inbetweening to be re-applied using the selected mode.

Further, in the situation where CoreRETAS HD has re-applied the inbetweening following changes made to the key frame parameters, a record is maintained of which [Type] of inbetweening has been applied to each [Key Frame Section]. This means that for a section that has had [Uniform] inbetweening applied, [Uniform] inbetweening will be applied regardless of the number of times that the key frames are changed, and a section that had [Accelerate] inbetweening applied will continue to have [Accelerate] applied regardless of the number of key frame changes made.

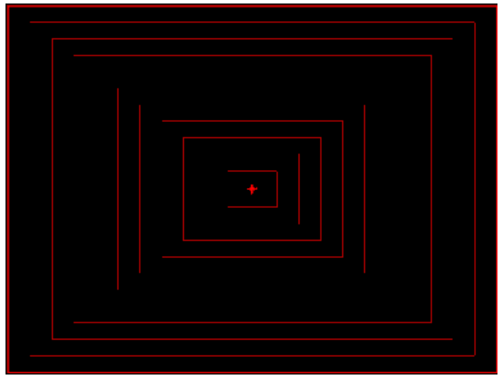
Conditions for applying inbetweening

For the selection, as long as there are one or more sections bounded by (continuous or non-continuous) key frames (key frame sections), it will be possible to apply inbetweening to the [Key Frame Section].

Types of inbetweening

The [Types] of inbetweening set in the [Inbetweening] pane of the [Inbetweening] palette are the settings relating to the inbetweening acceleration (degree of change of each frame). It is possible to set the [Type] of inbetweening individually for each key frame section. Even when changing the [Type] (inbetweening mode) of the inbetweening, the track of the [Pegbar] movement will not be changed, only the acceleration while moving along the track.

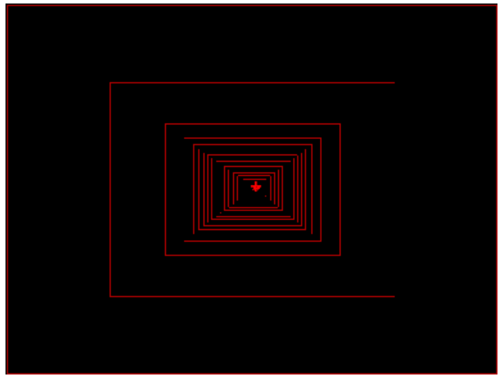
Uniform

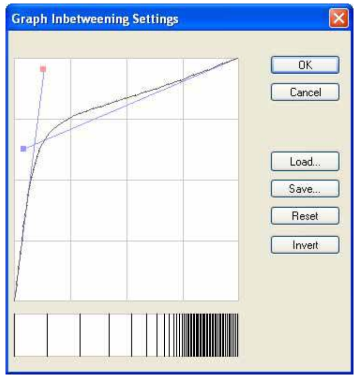


[Ex. Camera T.U.] (Track Up)

Inbetweening is implemented uniformly between each two key frames.

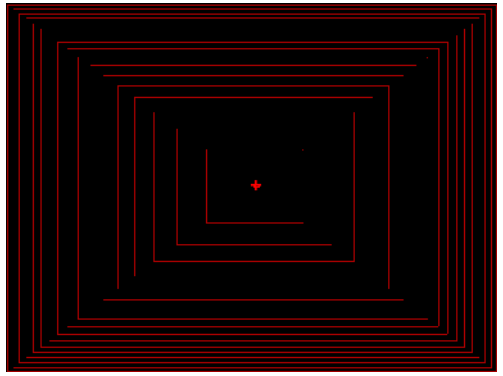
Graph





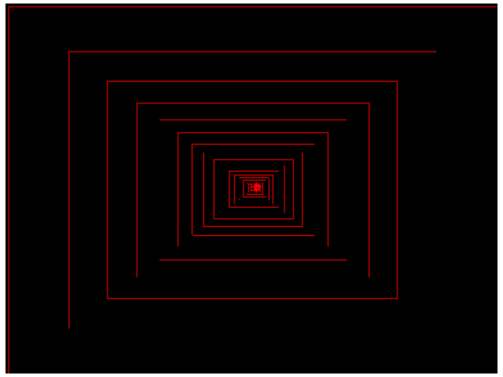
It is possible to adjust the degree of change (acceleration) of the inbetweening using the [Graph Inbetweening Setting] dialog box.

Accelerate



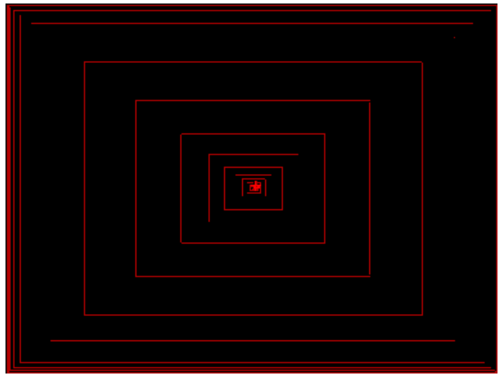
Implements inbetweening in which acceleration increases with time.

Decelerate



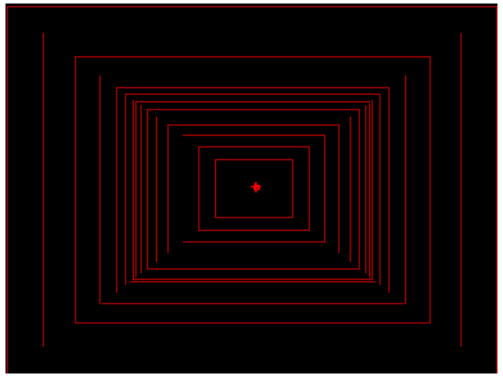
Implements inbetweening in which deceleration increases with time.

Accelerate >> Decelerate



Implements inbetweening that starts with an acceleration and has a deceleration just before finishing.

Decelerate >> Accelerate



Implements inbetweening that accelerates after a period of deceleration. Drawn as a graph, this inbetweening shows a grouping of [Key Frame Sections] in the middle.

Follow

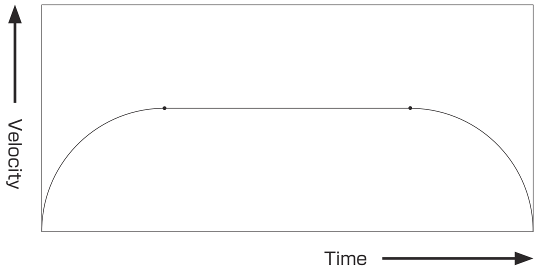
This inbetweening mode has been prepared to allow realization of [Follow] camera work.
Normally, this mode is used when applying a sliding movement to a background or overlay"book" to realize [Follow] camera work.

[Follow] differs from other inbetweening modes in that the inbetweening is applied based only on the [Movement Starting Position] and the [Movement Direction] and [Movement Amount between Each Frame]. It is not necessary to provide CoreRETAS HD with the [Movement Finishing Position] usually required for inbetweening modes.
The position of the movement finishing position is set from the automatic calculation when applying the inbetweening.
(However, when applying the inbetweening using [Follow], it will be necessary to set key frames at the beginning and end of the range that is to have inbetweening applied. In this situation, it will not be necessary to set the movement finishing key frame in the correct position, only to show the [range up to the frame for which inbetweening using [Follow] should be implemented])

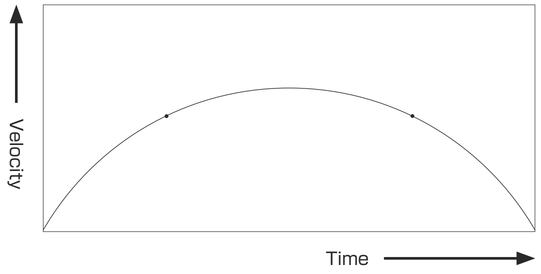
Uniform with acceleration and deceleration

[Accelerate] and [Decelerate] will be applied at the start and end of movement, respectively.

Because the central part will apply inbetweening at uniform speed, the movement will be [Accelerate >> Uniform >> Decelerate]. Viewed as a graph, the central part will be a flat graph.
This mode is effective when panning the camera.



[Uniform with Acceleration and Deceleration]



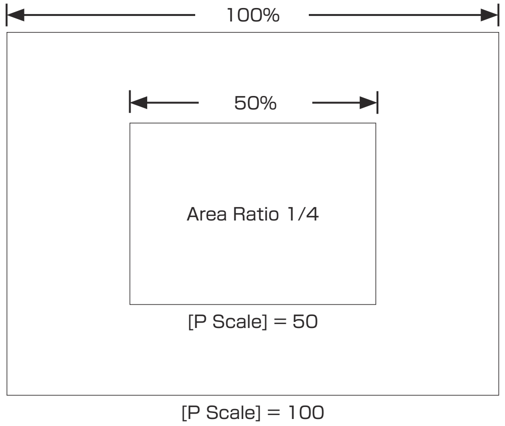
[Acceleration >> Deceleration]

The difference from the [Accelerate >> Decelerate] mode is that the graph of [Accelerate >> Decelerate] will show a peaked curve.

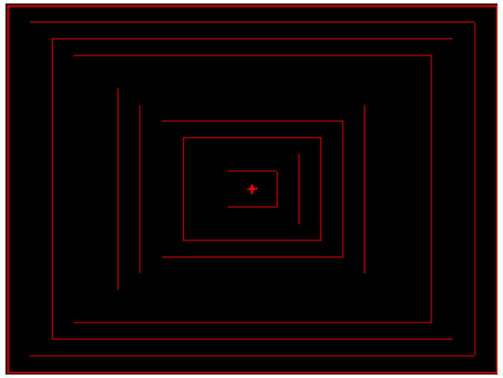
Scale proportion

This mode is mainly used for camera size inbetweening.
When the camera size is to be changed, the [P Scale X] and [P scale Y] values should be changed.
[P Scale X] shows the camera size X direction side length, while [P Scale Y] displays the camera size Y direction side length.

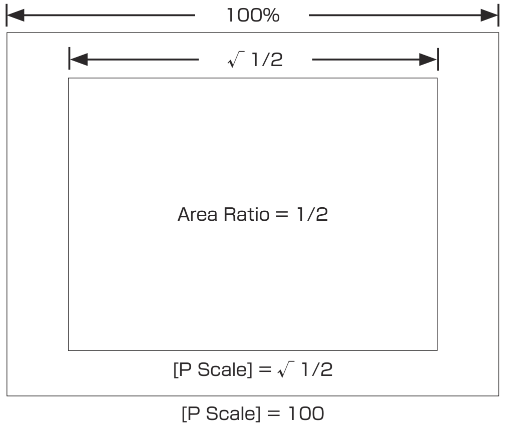
Setting the first key frame to [P Scale X]=[100] and the last key frame to [P Scale Y]=[1], and implementing [Uniform] inbetweening will mean that the midpoint between the two key frames will have a [P Scale X] value of half (around [50]).
When the [P Scale] values become 1/2, the area ratio of the image captured by the camera will be enlarged 4 times. When the [P Scale] value becomes 1/4, the area ratio of the image captured by the camera will be enlarged 16 times.



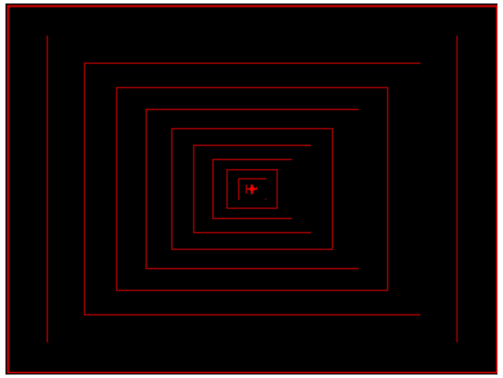
That is, in the situation where [P Scale] inbetweening is implemented at [Uniform] speed, because the image captured by the camera will become suddenly larger, as the inbetweening progresses the image will appear to suddenly accelerate during the latter half of the movement.



Setting the first key frame to [P Scale X]=[100] and the last key frame to [P Scale Y]=[1], and implementing [Scale Proportion] inbetweening will mean that the midpoint between the two key frames will have an [area captured by the camera] of 50% (=1/2). Accordingly, when implementing [Scale Proportion] inbetweening, the [P Scale X] value at the midpoint between the two key frames will be √ 1/2.

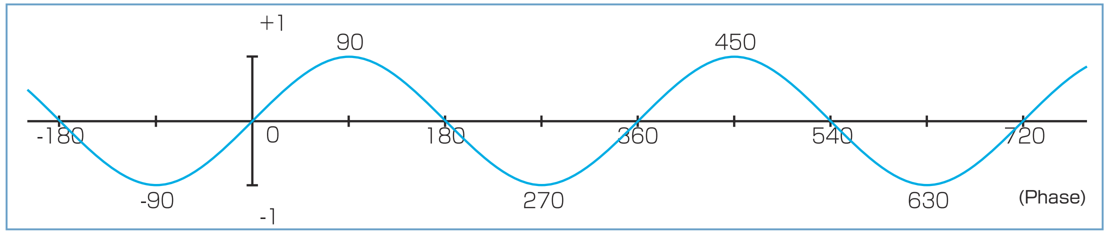


Therefore, when implementing inbetweening with the [P Scale] set to [Scale Proportion], because the image captured by the camera will become larger with correct proportion, the [sudden acceleration of the image during the latter half of the movement] will not appear.



Sine (specify starting/ending points)

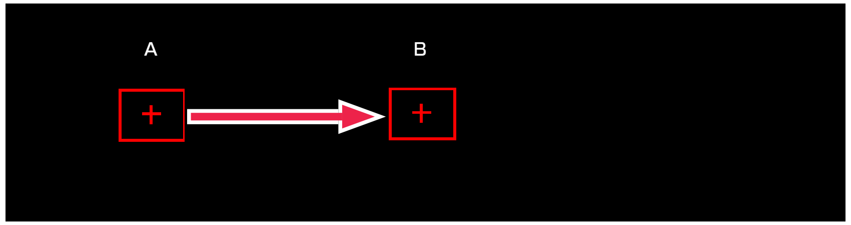
This mode applies a sine function based on the [Starting Phase] and [Finishing Phase] to the inbetweening acceleration.
In [Sine] inbetweening, a pendulum-like reciprocating motion with fixed amplitude and periodicity can be added to the parameters. Depending on the settings, the inbetweening values may exceed the range of the starting value and finishing value.



[Sine function graph]

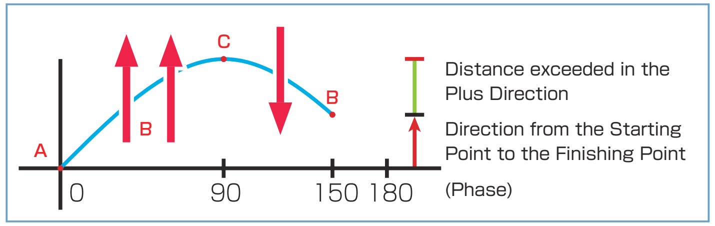
For each multiple of 90 in the sine function graph, there will be a change from [0 to 1 to 0 to -1] describing a progressive sine curve. One cycle of the phase will be between [0] and [360].
By specifying the [Starting Phase] and [Finishing Phase] in the [Inbetweening] palette and applying the inbetweening, it will be applied at a speed proportional to the inclination of the sine curve.

Example of inbetweening using [Sine (specify starting and ending points)]



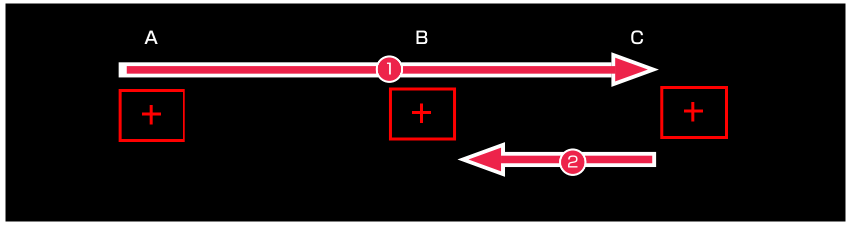
The above shows inbetweening of the [P Position X] in the X direction linking the starting point [A] with the finishing point [B].
When inbetweening is implemented with the above set to a [Starting Phase] of [0] and a [Finishing Phase] of [150], the sine curve will be as shown in Ex.1.

Ex.1
Starting Phase [0] Finishing Phase [150]


C
B
A
B
0
90
150
180
Distance exceeded in the Plus Direction
Direction from the Starting Point to the Finishing Point
(Phase)

The sine curve linking the starting point [A] (starting phase [0]) with the finishing point [B] (finishing phase 150) exceeds the height of the finishing point [B] once and passes the peak [C] before again returning to the finishing point [B].
In this case, in the situation where the sine curve between [A] and [B] exceeds the value (height) of [B] once before returning to [B] (in the situation where the peak [C] is beyond [B] when seen from [A]), the inbetweened parameters will exceed the [B] value once before inversing and returning to the [B] value.

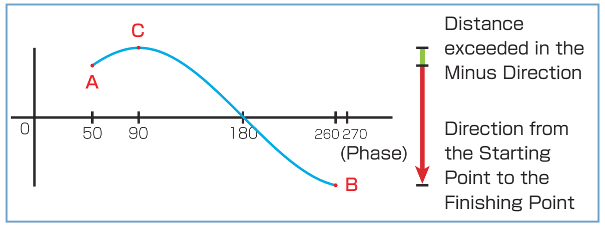
For the movement when inbetweening has been implemented as in the example, the sine value will be proportional to the movement distance.
The pegbar that started at starting point [A] will pass through [B] and move to [C] before returning by the same route and stopping at finishing point [B].

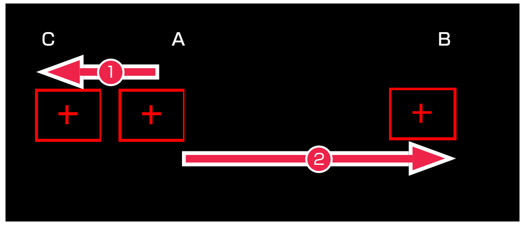


In [Sine] inbetweening, it will not always be the case that the upper side of the sine curve will have plus values and the lower side will have minus values.
The up or down direction and vertical height of the arrows stretching vertically on the graph from the [Starting Phase] to the height of the [Finishing Phase] provide the basis for viewing the sine curve. (The arrow directions show the plus values)

Ex.2

Starting Phase [50]   Finishing Phase [260]



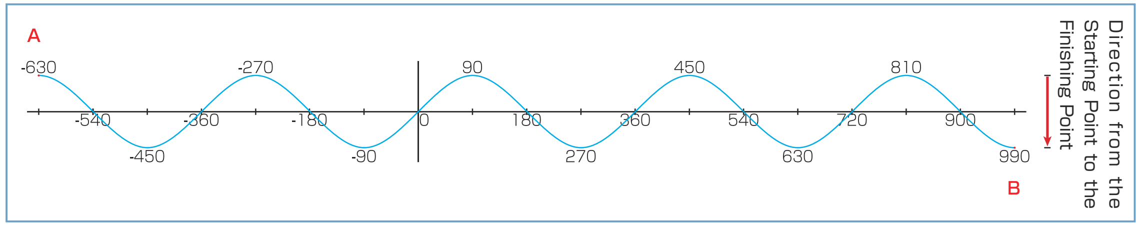


The sine curve linking the starting point [A] (starting phase [50]) with the finishing point [B] (finishing phase 260) starts by moving in the direction opposite to that of the finishing point [B] as seen from the starting point [A], before passing peak [C] and also through the height of [A] before returning to [B].

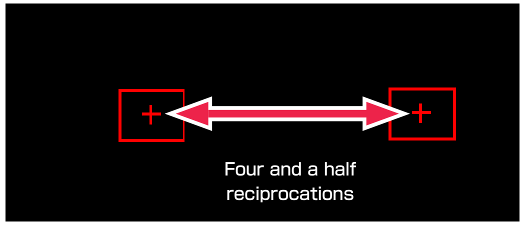
In this case, in the situation where the sine curve between [A] and [B] first moves in the direction opposite to the direction from the height of [A] to the height of [B], before returning to [B] (when peak [C] is beyond [A] when seen from [B]), the inbetweened parameters will first move in the direction away from [B] before inversing and returning to the [B] value.

Ex.3

Starting Phase [-630]   Finishing Phase [990]



There will be four and a half reciprocations between [A] and [B]



POINT

If the sine value is the same, inbetweening will not be possible

[If the sine value sought in the [Starting Phase] is the same as the sine value sought in the [Finishing Phase] (situation where the height of the [Starting Phase] on the graph is the same as the height of the [Finishing Phase]), it will not be possible to implement inbetweening using [Sine (Specify Starting and Ending Points)].

Ex. Starting phase [0] and Finishing phase [180], or Starting phase [-260] and Finishing phase [80].

Sine (specify amplitude and cycle)

It is possible to apply a sine function to the inbetweening acceleration, and carry out inbetweening with a fixed oscillation and frequency.

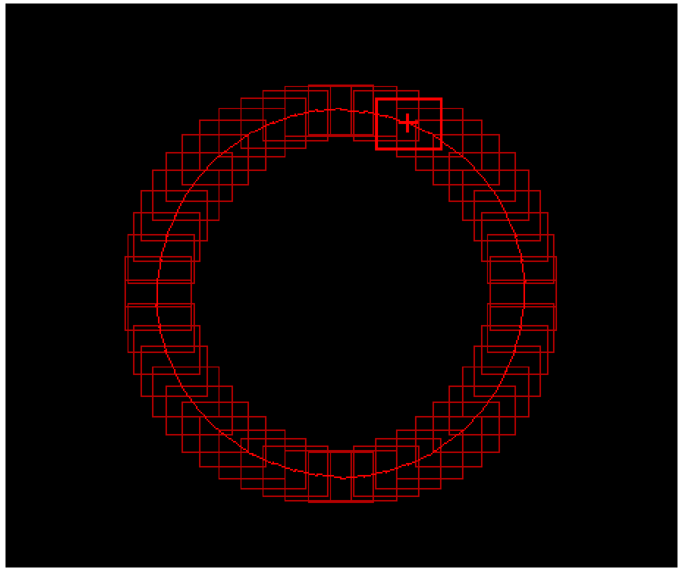
In addition to the [Starting Phase] that will become the starting point, it will be possible to freely set items such as the movement distance (amplitude), number of reciprocations (period), or angle.

Only the [Starting Point] needs to be set as a parameter, since the [Finishing Point] values will be determined from the settings.

If the [Amplitude] is set, for example, to [1000] pixels, the oscillation will change over the range of [-500] to [+500] pixels. Units may be selected from [Pixels], [mm] and [Inches].

The [Period] is set in frame units as the period over which the sine curve phase passes through one cycle (phase 0 to 360).

If the [Rotation] check box is set to the "On" condition (when the inbetweening is linked in the XY directions), it will be possible to carry out inbetweening in a circular shape, where the value set as the [Amplitude] will become the diameter.



Polynomial

This [Polynomial] differs from the other inbetweening modes in that calculation using the [Polynomial] is carried out based on the [First Key Frame Values] (Starting value), with the result becoming a parameter. This means that the [Finishing Key Frame Values] that are normally used in the inbetweening modes will not need to be provided to CoreRETAS HD.

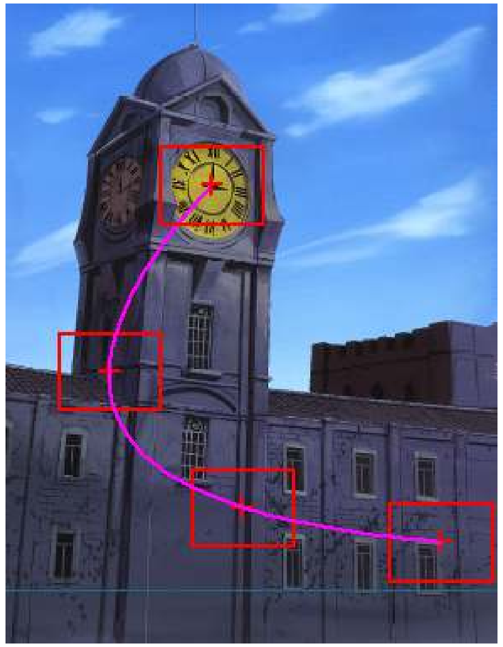
The parameter derived by the polynomial is obtained using the following formula:

$at^3 + bt^2 + ct$ + Starting Value

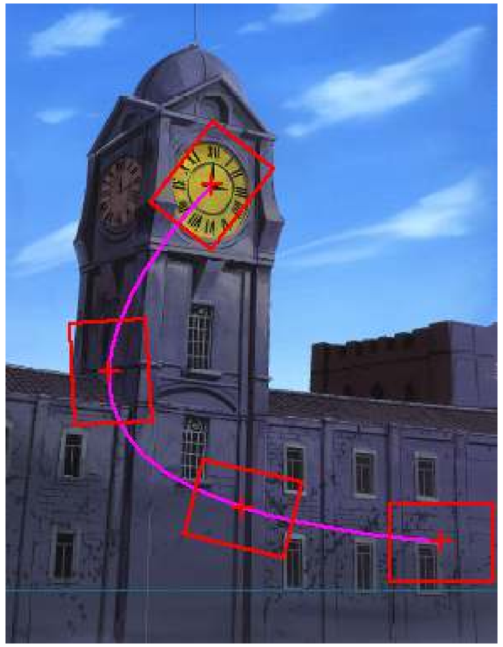
a, b, c: Optional values (Can be defined by users)
t: Passed frames (Shows the difference in number of frames from the first key frame. Starts from [0].)
Starting Value: Value set to the first key frame.

Follow movement direction

This inbetweening method can only be selected when implementing inbetweening using [P Rotation] and [Rotation]. (If [P Rotation] or [Rotation] are not selected as parameters, this item will not be shown on the menu and therefore can not be selected.)
Selecting [Follow Movement Direction] as the inbetweening method will automatically adjust the angle of the pegbar or layer that is being moved to align it with the movement direction.



Normal [Motion Path]



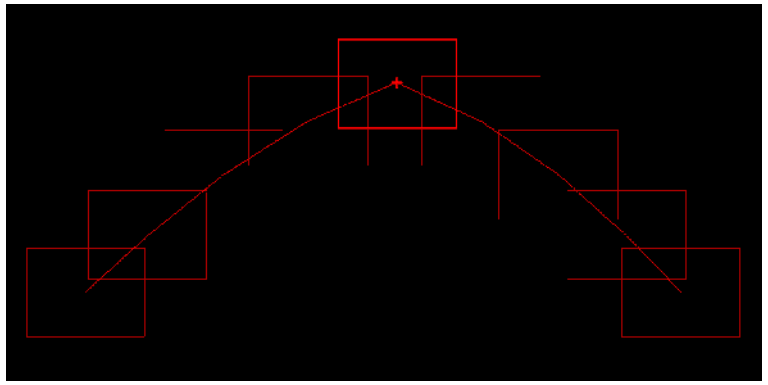
[Follow Movement Direction]

Splined inbetweening

When selected, inbetweening of the [Key Frame Sections] will be implemented using splines, and the data cells will be shown in pink.

When implementing [Splined Inbetweening] for sections with three or more key frames, there will be a difference from the result of [Auto Inbetweening Sections]. When using it for sections that only have two key frames, the result will be the same as in [Auto Inbetweening Sections].

When there are three or more key frames and the key frames in the middle of the selection are [Continuous Key Frames], implementing [Splined Inbetweening] will achieve a result in which the frames will be linked by a smooth track throughout.

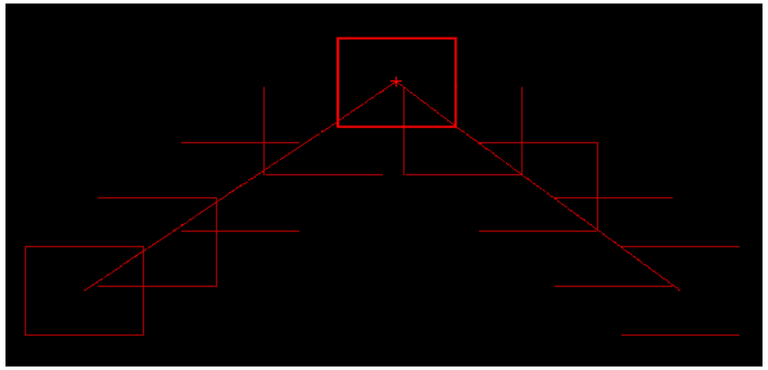


[Inbetweening applied to three key frames] (When a continuous key frame is in the middle)

The two movements will be linked in a bow-like movement.

When there are three or more key frames and the key frames in the middle of the selection are [Non-continuous Key Frames], implementing [Splined Inbetweening] will achieve a result in which inbetweening will be applied separately for each of the sections between two [Non-continuous Key Frames].

As a result, the track will show separate and different movements between [Non-continuous Key Frames].

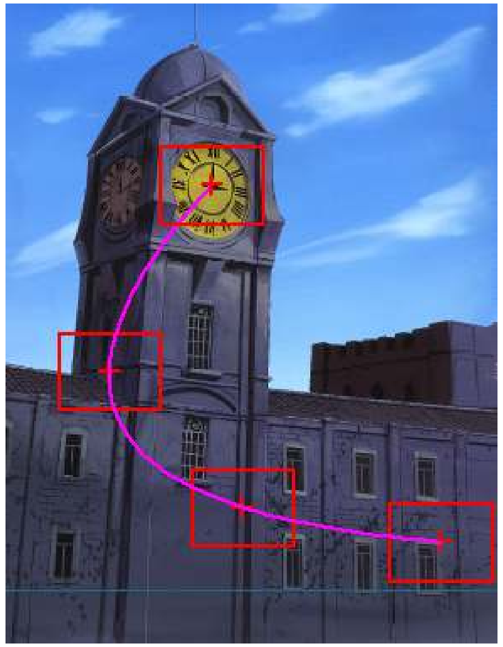


[Inbetweening applied to three key frames] (When a non-continuous key frame is in the middle.)

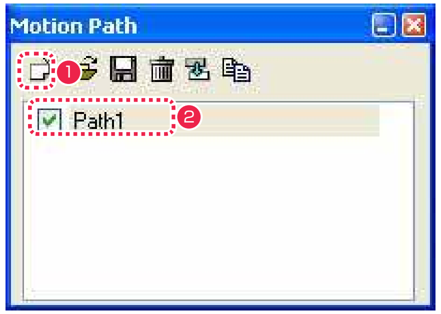
The two movements do not influence each other, and each is inbetweened as a straight line.

Motion path

[Motion Path] is an inbetweening method in which the pegbar (camera or cel) is moved along a path (track) drawn on the stage. It will be possible to easily move a [Pegbar] (Camera or layer) along a complex path shape, such as a hand-drawn free curve.

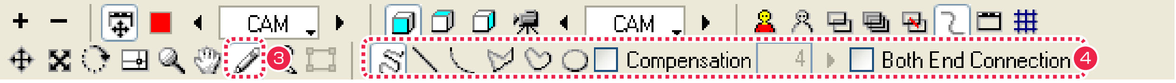


Shooting using motion path



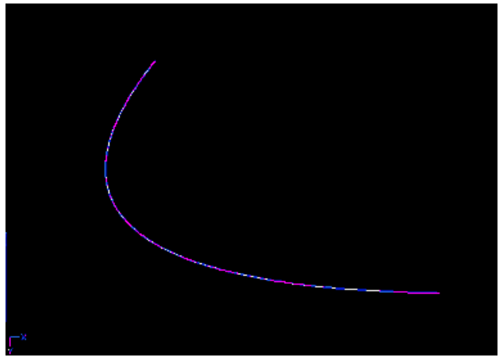
① Click the [New Path] button of the [Motion Path] palette to create a path.

② Selecting the path from the [Motion Path] palette will allow use of the [Create Path] tool in the [Stage] window.



③ Select the [Create Path] tool in the [Stage] window.

④ Selecting the [Create Path] tool will allow use of options such as [Free Curve], [Line], [Curve], [Polyline], [Continuous Curve], and [Ellipse] as the path drawing mode.

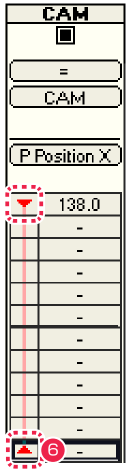


⑤ Draw the path in the [Stage] window.

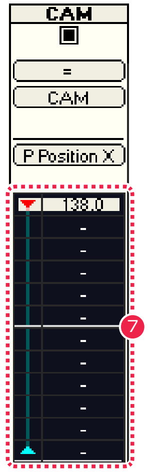
POINT

If the [Create Path] tool cannot be used

In the case where the [Create Path] tool cannot be used, check whether a path has been selected in the [Motion Path] palette.


CAM
=
CAM
P Position X
138.0
⑥

⑥ In the [X-sheet] window, enclose the start and finish of the range that the pegbar (camera or cel) is to be moved with [Non-continuous Key Frames] to make a [Key Frame Section].

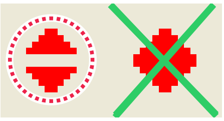

CAM
=
CAM
P Position X
138.0
⑦

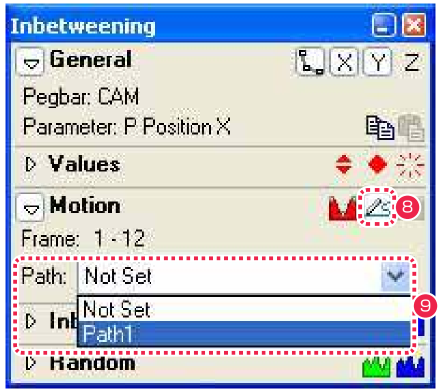
⑦ Select the X-sheet [Key Frame Section].

POINT

The motion path should be used with non-continuous key frames

When using [Motion Path], be sure that the section it is to be used for is enclosed at start and finish with [Non-continuous Key Frames]. If either of the key frames has been set as a [Continuous Key Frame], it will not be possible to set the [Motion Path].

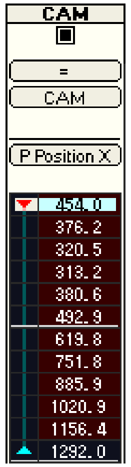


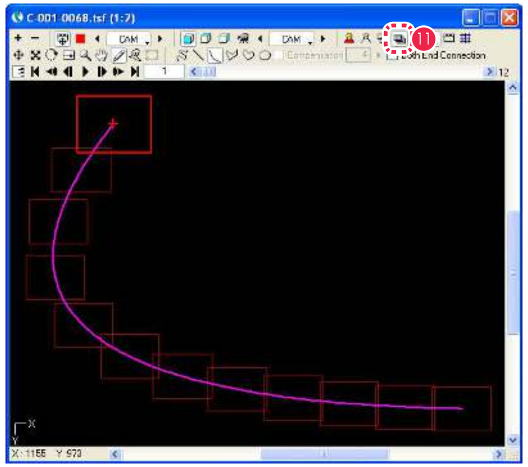

Inbetweening
General
X
Y
Z
Values
Motion
⑧
Not Set
Path1
⑨
Inb
Random

Pegbar: CAM
Parameter: P Position X
Frame: 1 - 12
Path: Not Set

⑧ Click the [Motion Path] button in the [Motion] pane of the [Inbetweening] palette.

⑨ Select the path that is to be applied to the [Key Frame Section] from the [Path] pop-up menu. (The example shows the selection of [Path 1])


CAM
=
CAM
P Position X
454.0
376.2
320.5
313.2
380.6
492.9
619.8
751.8
885.9
1020.9
1156.4
1292.0


C-001-0068.tsf (1:7)
⑪

⑩ Coordinate inbetweening will be carried out matching the path movement.
In the default, the [Starting Point] (Start of Drawing) will correspond to the first key frame, and the [Finishing Point] (End of Drawing) will correspond to the last key frame.

⑪ By clicking the [All Frames] button in the [Stage] window, it will be possible to confirm the result of the inbetweening.

Points requiring caution for shooting using motion path

Movement range on the motion path

After setting the [Motion Path Sections], if the [Move] tool is used to drag a frame in the [Stage] window, the range of movement possible will only be along the track of the [Motion Path].

In order to freely move the pegbar to a position unrelated to the track, it will be necessary to release the [Motion Path Section] settings and change to [Manual Sections].

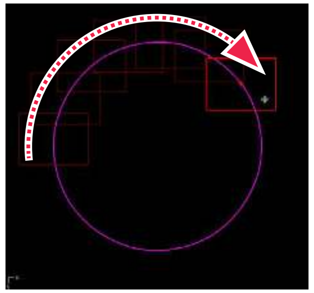
By setting the [Auto Refresh] button in the [General] pane of the [Inbetweening] palette to "Off" and using the [Manipulator] to move the pegbar, it will be possible to move outside the motion path while remaining as a [Motion Path Section].

Relationship between track and acceleration

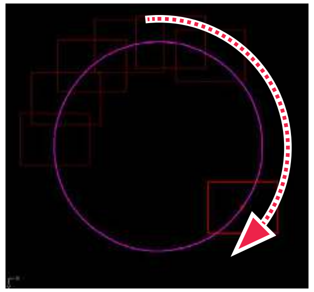
The [Motion Path] regulates the movement [Track], while the [Type] of inbetweening determines the [Acceleration]. Accordingly, it will be possible to select settings such as "[Accelerate] along the [Motion Path]" and "[Polynomial] along the [Motion Path]".

Caution points concerning circular motion paths

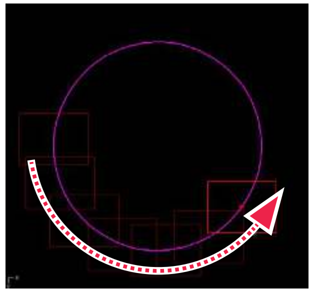
When using circular (Ellipse) paths or paths in which both ends are joined, if the [Move] tool is used to move the pegbar past the point halfway round the shape, the rotation direction will change to the opposite direction as soon as the pegbar moves past the midpoint. This is because inbetweening is always carried out over the shortest distance between the key frames, and it will not be possible to move the pegbar through a rotation that exceeds 180°.



The right end key frame is moved to extend the movement distance.

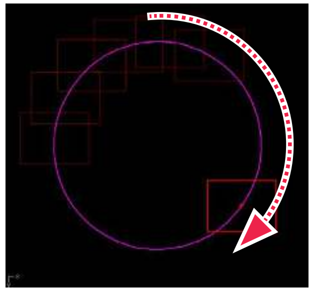


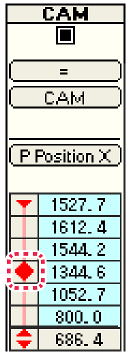
Using the [Move] tool, the end is dragged down to the right.



At the point where 180° is exceeded, the inbetweening will be changed to the anticlockwise direction.

In this situation, setting one more key frame part-way will allow the angle to be rotated more than 180°.





CAM

=

CAM

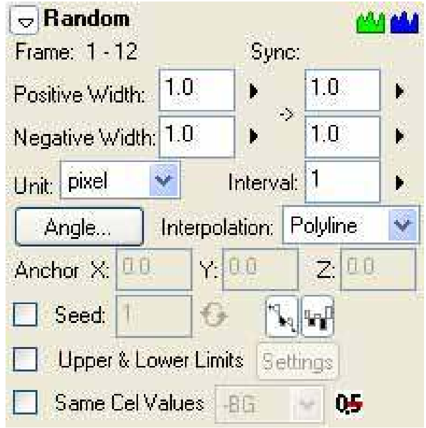
P Position X

1527.7
1612.4
1544.2
1344.6
1052.7
800.0
686.4

Otherwise, it will also be possible to realize this by setting the [Movement Distance] using [Follow]. To set the rotation in the opposite direction, input the [Movement Distance] as a minus amount.

Random inbetweening

In this inbetweening, a random movement (numerical instability) can be applied to the parameters.
Select the range using the X-sheet and make the settings in the [Random] pane of the [Inbetweening] palette to apply the inbetweening.



Random

Frame: 1 - 12 Sync:

Positive Width: 1.0 -> 1.0

Negative Width: 1.0 -> 1.0

Unit: pixel Interval: 1

Angle... Interpolation: Polyline

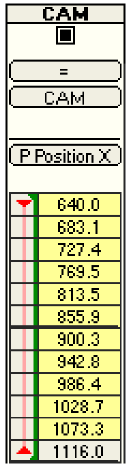
Anchor X: 0.0 Y: 0.0 Z: 0.0

☐ Seed: 1

☐ Upper & Lower Limits Settings

☐ Same Cel Values BG 0.5

In [Random Sections], a green line is shown in the [Key Frame Display] area.
It is possible to set [Random Inbetweening] in combination with [Manual Sections], [Splined Sections], [Motion Path Sections], and [Auto Inbetweening Sections].



CAM

=

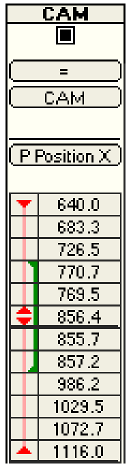
CAM

P Position X

640.0
683.1
727.4
769.5
813.5
855.9
900.3
942.8
986.4
1028.7
1073.3
1116.0

[Auto Inbetweening Section] + [Random Section]

Further, it is also possible to set [Random Inbetweening] regardless of whether or not there are key frames.



CAM

=

CAM

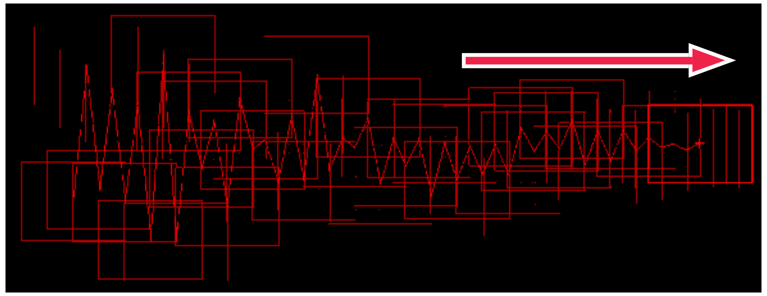
P Position X

640.0
683.3
726.5
770.7
769.5
856.4
855.7
857.2
986.2
1029.5
1072.7
1116.0

[Random Section] that spans [Key Frames]

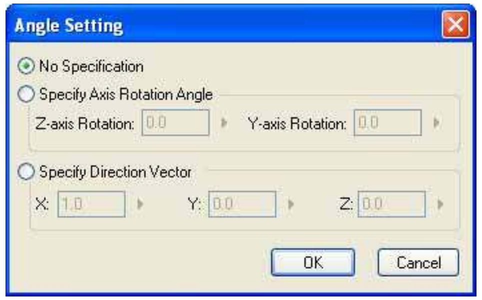
Random instability width

The direction of the [Random] instability can be selected between the positive direction and negative direction.
Because the first value and last value can be set separately, it will also be possible to make settings such as [Instability is large initially, but becomes smaller with time].



Angle setting

By clicking the [Angle Setting] button, it will be possible to set the instability direction using the [Angle Setting] dialog box.
By selecting [No Specification], [Instability] will be generated independently for each XYZ.



Angle Setting

● No Specification

○ Specify Axis Rotation Angle

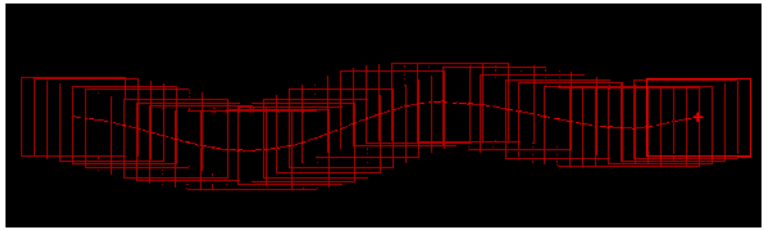
Z-axis Rotation: 0.0 Y-axis Rotation: 0.0

○ Specify Direction Vector

X: 1.0 Y: 0.0 Z: 0.0

Instability period

By adjusting the [Interval] value, it will be possible to adjust the instability period using [Random].
For the default of [1], detailed instability will be applied in single frame units. Setting a higher number will allow generation of a gentler wave-shaped instability.



Situation using 50 frames in which the [Interval] has been set to [15], the instability width is [100 pixels], and the interpolation is set to [Curve].

Seeds

It is possible to use [Seeds] in the generated random numbers.
When the [Seed] is the same, the generated instability will be the same.

For more details, see the [Seeds] pages.

Relative input

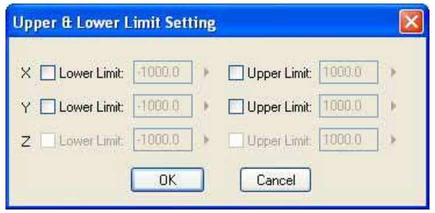
When this button is set to "On", the random numbers generated by [Random] will be added to the parameters that were originally contained in the [Data Cells]. (Relative)
When this button is set to "Off", the random numbers generated by [Random] will be overwritten on top of the parameters that were originally contained in the [Data Cells]. (Absolute)

Generate positive and negative alternately

Because the random numbers generated using [Random] will not always have average positive and negative proportions, sometimes there will be a series of purely positive and sometimes purely negative numbers.
To alternately generate positive and negative numbers, set the [Generate Positive and Negative Alternately] button to "On".

Upper & Lower limits

By setting the [Upper & Lower Limits] check box to the "On" condition and clicking the [Settings] button, it will be possible to use the [Upper & Lower Limits Settings] dialog box to set the limits of the instability width.



Upper & Lower Limit Setting

X ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

Y ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

Z ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

Same values for same cels

In the situation where the cel numbers are the same, the same random values will be applied.
When this is set to "On", the target layer can be selected from the pop-up menu.

Round figures below decimal point

When this is set to "On", the fractions of the random value below the decimal point will be rounded to the nearest integer.

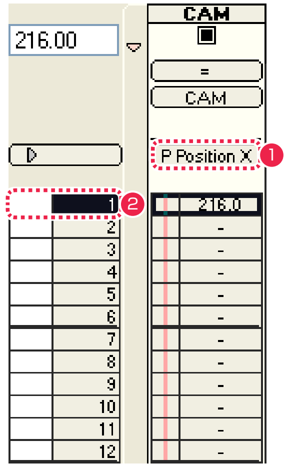
Step: 04

Auto refresh

In this step, an explanation is given about Auto Refresh.

When implementing [Inbetweening], the operation of CoreRETAS HD will be different depending on whether the [Auto Refresh] button in the [General] pane of the [Inbetweening] palette is set to the "On" condition or the "Off" condition.

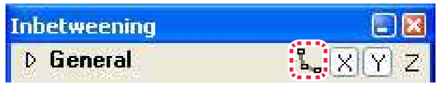
When auto refresh is set to "Off"


216.00
CAM
=
CAM
P Position X ❶
❷

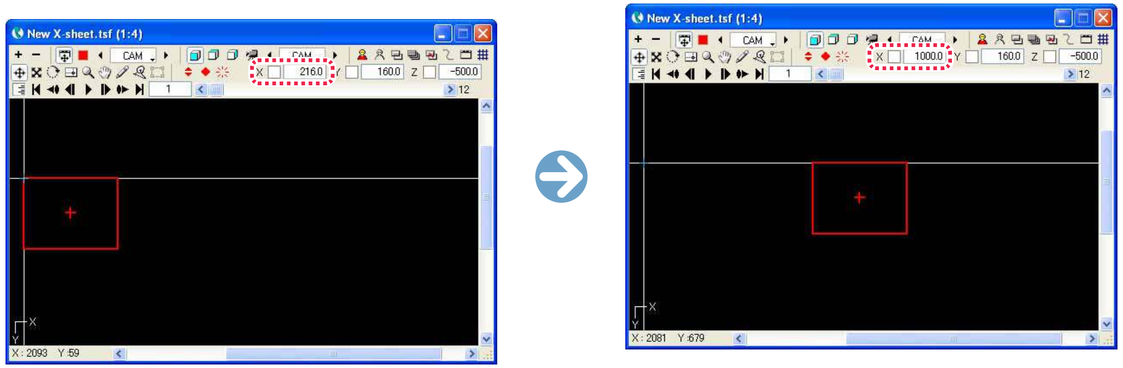
	CAM
1	216.0
2	-
3	-
4	-
5	-
6	-
7	-
8	-
9	-
10	-
11	-
12	-

❶ Set the X-sheet [Input Parameter Selection] menu to show [P Position X].

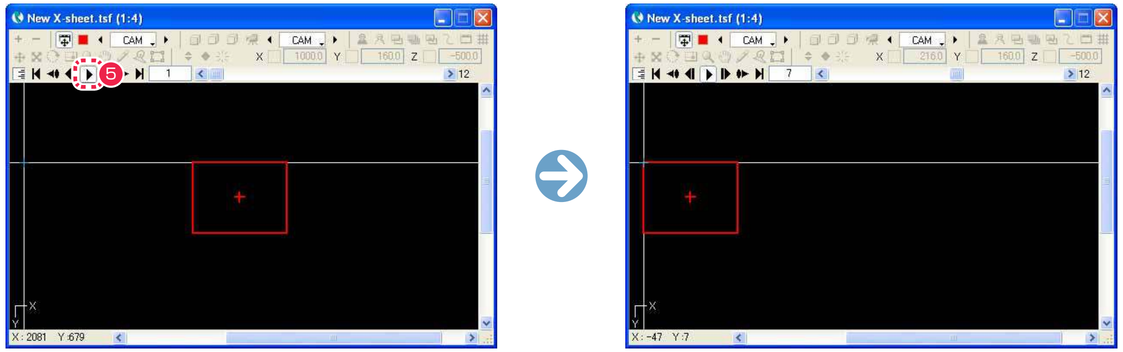
❷ Set the [Current Frame] to the 1st Frame.


Inbetweening
General
X
Y
Z

❸ Set the [Auto Refresh] button of the [Inbetweening] palette to the "Off" condition.


New X-sheet.tsf (1:4)
CAM
X 216.0 Y 160.0 Z -500.0
X: 2093 Y: 59
New X-sheet.tsf (1:4)
X 1000.0 Y 160.0 Z -500.0
X: 2081 Y: 679

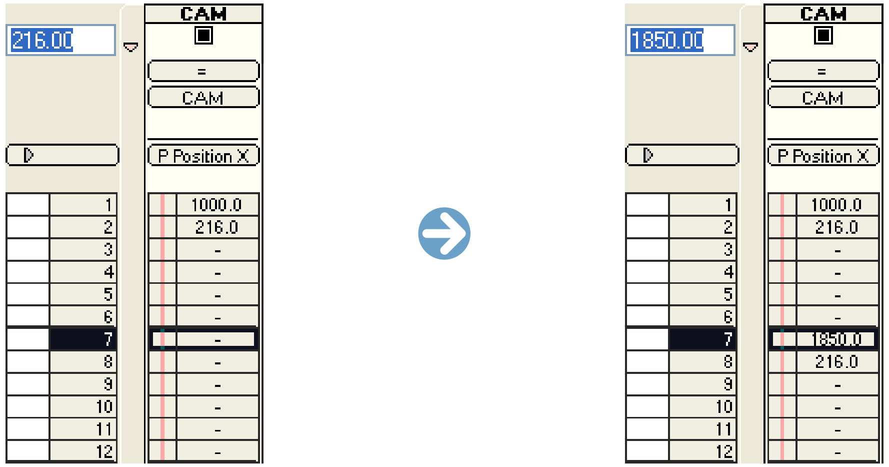
❹ Change the 1st Frame [P Position X] coordinate.


New X-sheet.tsf (1:4)
❺
X: 2081 Y: 679
New X-sheet.tsf (1:4)
X: -47 Y: 7

[1st Frame]

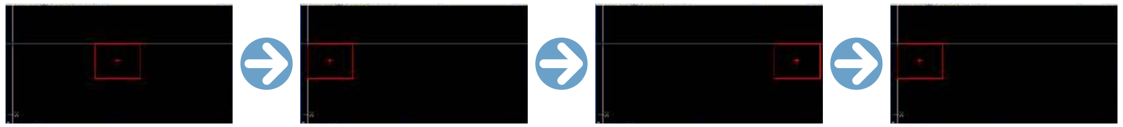
[2nd to 12th Frame]

❺ Click the [Start/Stop] button in the [Stage] window to confirm the positions.
Because [Auto Refresh] is set to "Off", even though the 1st Frame parameters have been changed, the coordinates of the 2nd and following frames will be the same.


216.00
CAM
=
CAM
P Position X
1850.00
CAM
=
CAM
P Position X

	CAM (before)	CAM (after)
1	1000.0	1000.0
2	216.0	216.0
3	-	-
4	-	-
5	-	-
6	-	-
7	-	1850.0
8	-	216.0
9	-	-
10	-	-
11	-	-
12	-	-

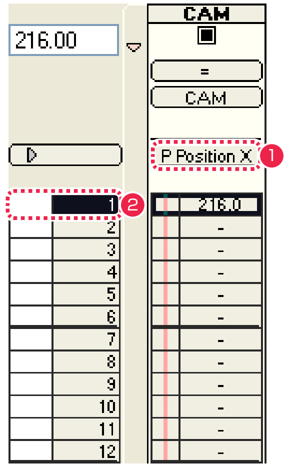
❻ In the same way, set the [Current Frame] to the 7th Frame, and change the 7th Frame coordinate.



[1st Frame] [2nd to 6th Frame] [7th Frame] [8th to 12th Frame]

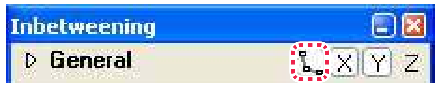
❼ Click the [Start/Stop] button in the [Stage] window and confirm the positions.
Apart from the 1st and 7th Frame that have had their parameters changed, the coordinates of the other frames will still show their default values.

When auto refresh is set to "On"

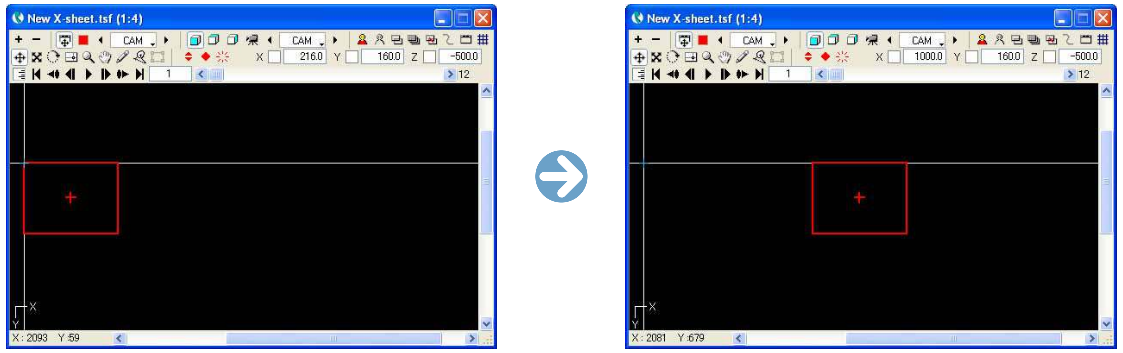

216.00
CAM
=
CAM
P Position X
①
②
216.0
1
2
3
4
5
6
7
8
9
10
11
12

① Set the X-sheet [Input Parameter Selection] menu to show [P Position X].

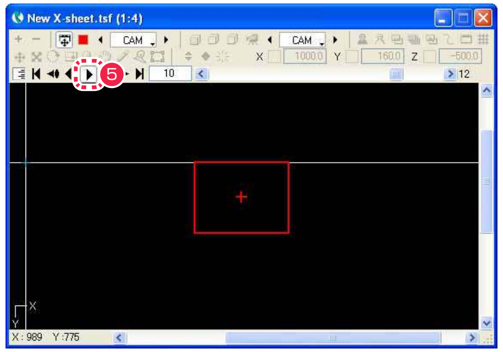
② Set the [Current Frame] to the 1st Frame.


Inbetweening
General
X
Y
Z

③ Set the [Auto Refresh] button of the [Inbetweening] palette to the "On" condition.

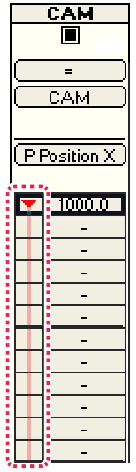

New X-sheet.tsf (1:4)
CAM
216.0
160.0
-500.0
1000.0
X : 2093 Y : 59
X : 2081 Y : 679

④ Change the 1st Frame [P Position X] coordinate.


New X-sheet.tsf (1:4)
CAM
1000.0
160.0
-500.0
⑤
10
12
X : 989 Y : 775

[1st to 12th Frame]

⑤ Click the [Start/Stop] button in the [Stage] window to confirm the positions.
When [Auto Refresh] is set to "On", if the 1st Frame parameters are changed, a key frame will automatically be set to the 1st Frame and the parameters of the 2nd and following frames will also be changed to the same values as the 1st Frame.


CAM
=
CAM
P Position X
1000.0

It is recommended that [Auto Refresh] should normally be used in the "On" condition, since it will be convenient.

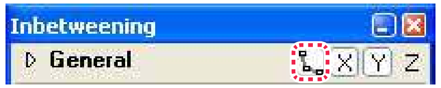
Step: 05 Offsets

In this step, an explanation is given about offsets.

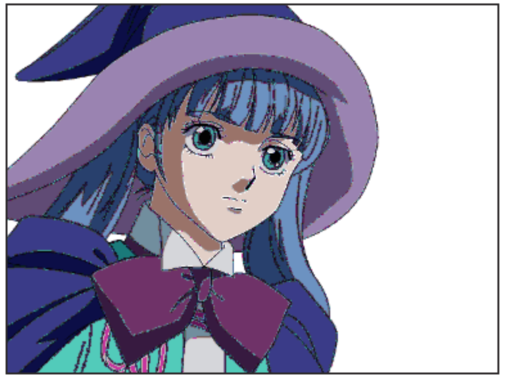
When [Pegbars] are being used to give a number of layers the same movement, it is possible to apply a displacement (offset) to some of the layers when moving them.

Among the parameters shown on the X-sheet, parameters that have the character [P] before their name, such as [P Position X], are [Pegbar] parameters, while parameters that do not have [P], such as [Position X], are the parameters of each [Cel] layer. Layer parameters show relative coordinates from the [Pegbar] showing how far each layer is displaced (offset) from the [Pegbar] parameters.

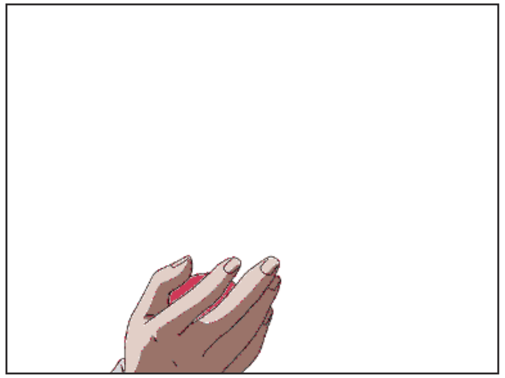
The following is an example of offset operation.



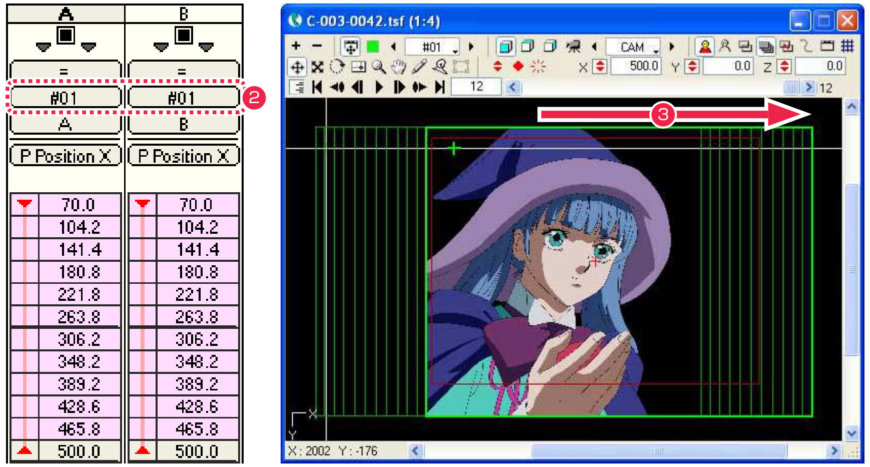
① Set the [Auto Refresh] button of the [Inbetweening] palette to the "On" condition.



[A] Cel



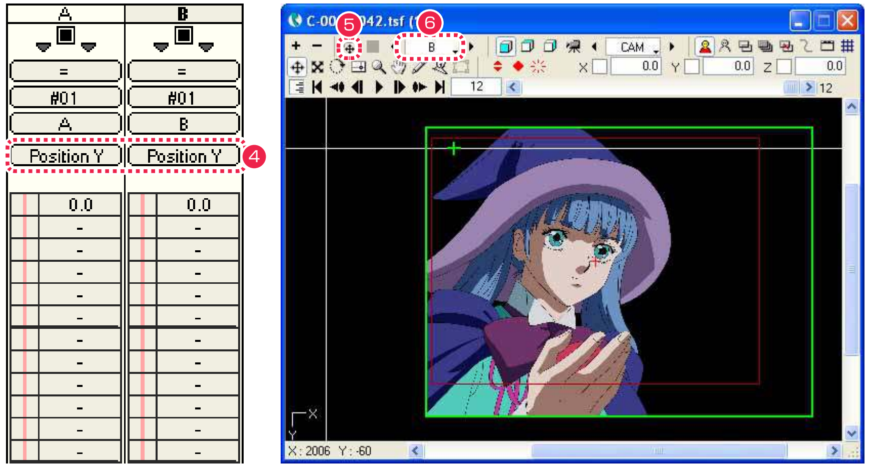
[B] Cel



A	B
=	=
#01	#01
A	B
P Position X	P Position X
70.0	70.0
104.2	104.2
141.4	141.4
180.8	180.8
221.8	221.8
263.8	263.8
306.2	306.2
348.2	348.2
389.2	389.2
428.6	428.6
465.8	465.8
500.0	500.0

② Connect the [A] cel and [B] cel to the same pegbar [#01].

③ Move the pegbar [#01] of the last frame so that the [A] cel and [B] cel are both given a parallel movement (change the coordinate X from 70 to 500), and inbetweening will be implemented.

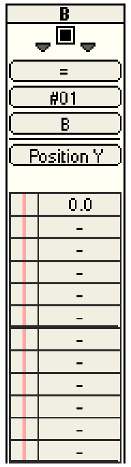


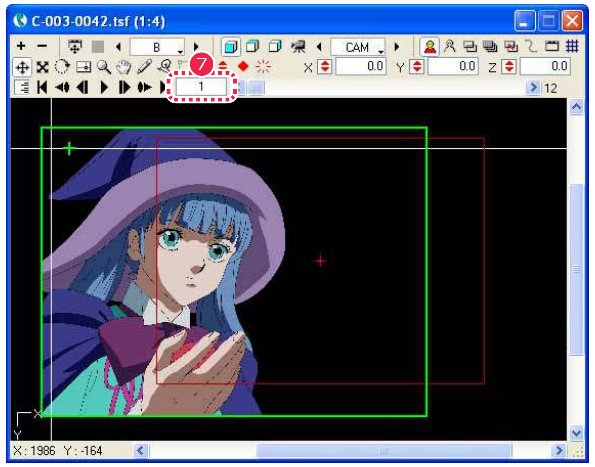
A	B
=	=
#01	#01
A	B
Position Y	Position Y
0.0	0.0
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-
-	-

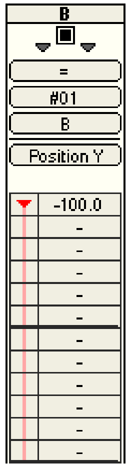
④ Switch the [X-sheet] parameter shown to [Position Y].

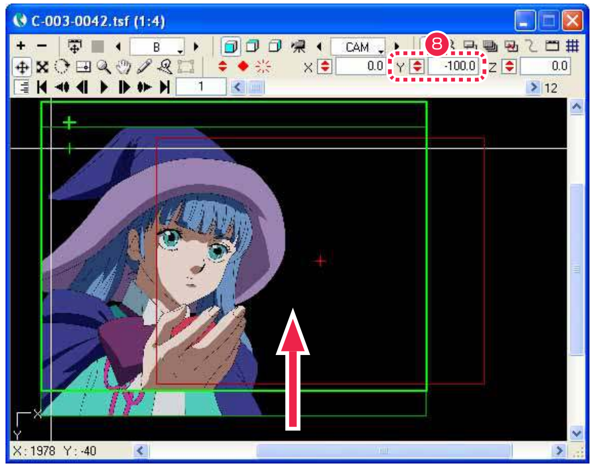
⑤ Switch the [Stage] window [Pegbar Edit/Layer Edit] button to the [Layer Edit] condition.

⑥ Switch the operation target to the [B] layer.


B
=
#01
B
Position Y
0.0


C-003-0042.tsf (1:4)
B
CAM
X 0.0
Y 0.0
Z 0.0
1
12
⑦
X : 1986 Y : -164

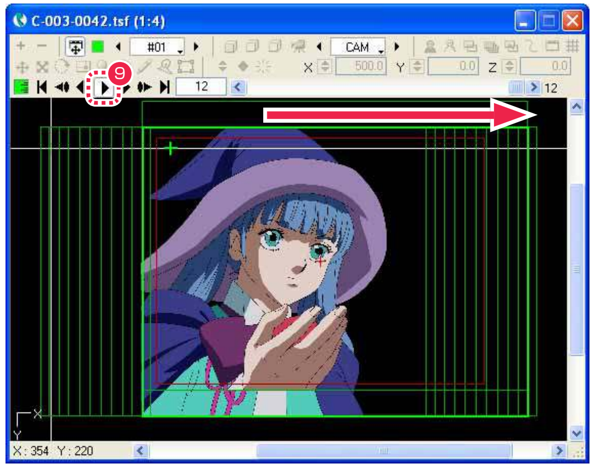

B
=
#01
B
Position Y
-100.0


C-003-0042.tsf (1:4)
B
CAM
X 0.0
Y -100.0
Z 0.0
1
12
⑧
X : 1978 Y : -40

⑦ Set the [Current Frame] to 1.

⑧ Operate the [Y Coordinate] to displace the B cel (offset it) upwards from the pegbar.

In the example, the [B] cel (the cel showing the hand) is offset upwards by a 100-pixel amount.


C-003-0042.tsf (1:4)
#01
CAM
X 500.0
Y 0.0
Z 0.0
12
12
⑨
X : 354 Y : 220

⑨ Confirm the movement using the [Stage] window [Play/Stop] button.
The [B] cel will be offset by the amount specified in [Y coordinate], and will have the same movement as the pegbar [#01].

POINT

[Pegbar edit/layer edit] button

When the [Stage] window [Pegbar Edit/ Layer Edit] button is set to "On", the [Pegbar] can be operated, and when the button is set to "Off", it will be possible to offset the [Layer] with regard to the [Pegbar].

During pegbar editing   During layer editing

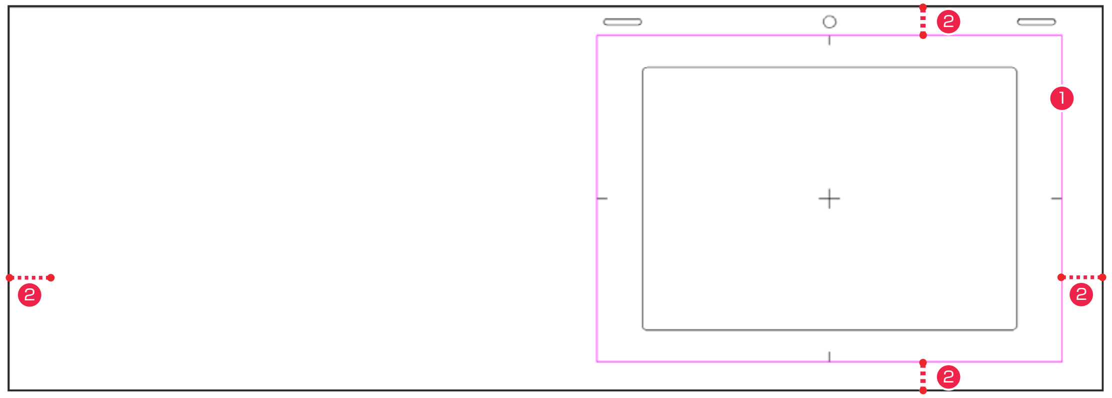
Normally, pegbar setting should be used

In camera work using offsets, the common use of parameters among a number of layers will not be possible. Accordingly, with the exception of movements that can only be carried out by using offsets, the button should be set to [Pegbar] editing.

Step: 06 Anchor frame and margins

In this step, an explanation is given about anchor frames and margins.

The concepts of [Anchor Frame] and [Margins] have been introduced throughout the RETAS!PRO HD series.



① Anchor Frame

② Margins

Anchor frame

The anchor frame can be said to perform the same role as the [Peg Holes] in paper animation sheets.

In drawing paper sheets, even though there was a mixture of various drawing paper sizes, because position matching for layering was conducted using the [Peg Holes] positions, there were no problems relating to position matching.

In animation work since digitalization, if there is a mixture of various sizes of animation data, there is no clear standard for which position should be used for position matching in layering, and the position used for image layering has to be determined individually by each operator while viewing the materials.

In DGA format and CEL format an [Anchor Frame] is embedded in each image to undertake the role of the pegbar, so that automatic and correct processing can be realized when layering is conducted such as when reading the images into the light table.

Margins

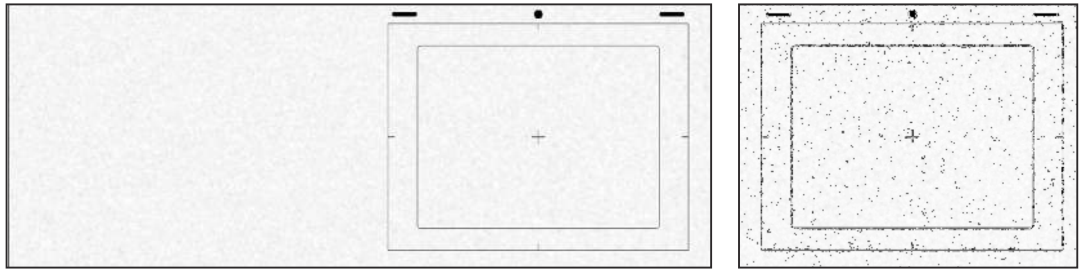
This is the area outside the drawing frame.

Adding a margin creates leeway to support camera work including [Vibration]. However, the margin creates inconvenience since the size of the margin is not regulated, so that it is not apparent which part is the margin simply by looking at the image. It will also be necessary to adjust the position of the margin portion when carrying out shooting.

Because the [Drawing Frame] information embedded in the image in DGA format and CEL format images will provide a basis for appropriate processing of the margin parts, it will be possible to make full use of the functions of margins.

Drawing paper sheets

Because paper sheets have [Peg Holes], the layering position will be determined simply by placing the paper on the pegbar.

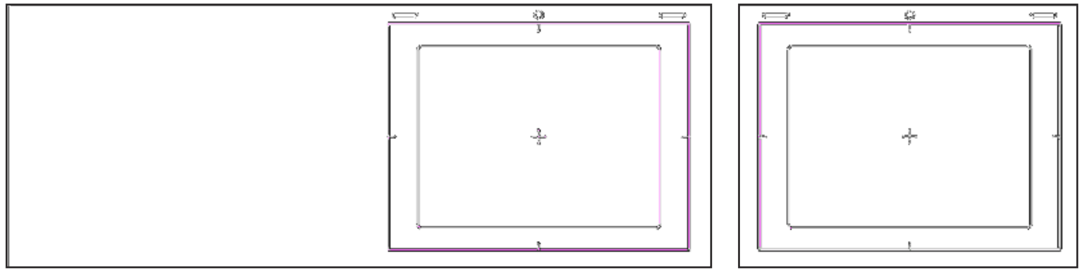


General digital image data

Because there will be no [Peg Holes] information, it will not be possible to differentiate between [Left Alignment], [Center Alignment], and [Right Alignment] simply by looking at the data.

DGA and CEL format digital images

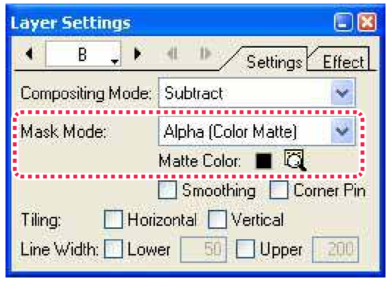
Due to the presence of the [Anchor Frame], which undertakes the same role as the [Peg Holes], even in situations where different-sized images are mixed together, the positions can be automatically matched when grouping using the pegbar and layering on the light table.



Step: 07 Mask modes

In this step, an explanation is given about mask modes.

Specification of the masking of images (which parts of the images will be made transparent) loaded to layers is carried out.



Layer Settings

B

Settings | Effect

Compositing Mode: Subtract

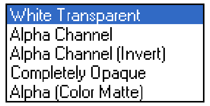
Mask Mode: Alpha (Color Matte)

Matte Color: ■

☐ Smoothing ☐ Corner Pin

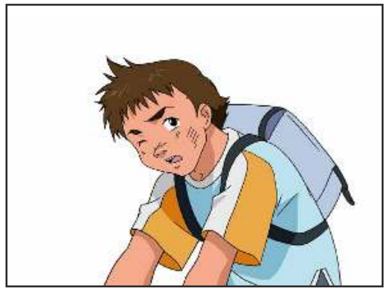
Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

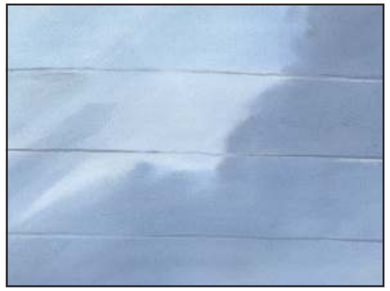


White transparent

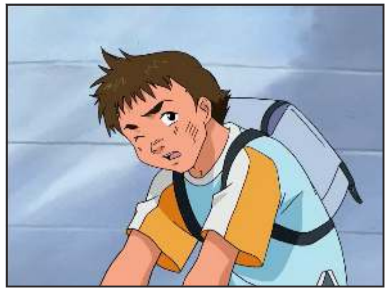
Compositing mode in which completely [White] (RGB=255,255,255) pixels in images will be transparent.
Layers in which [Mono Trace] images have been read in should be set to [White Transparent].



[Mono Trace] image
(Area surrounding the
character is RGB=255,255,255)



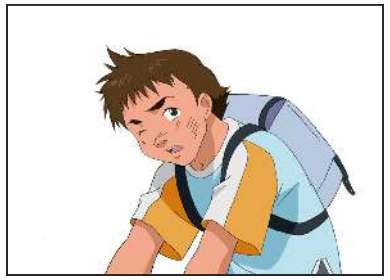
[Background]



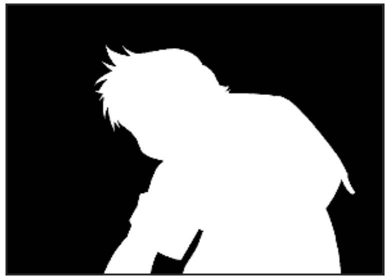
[Shooting effect]

Alpha channel

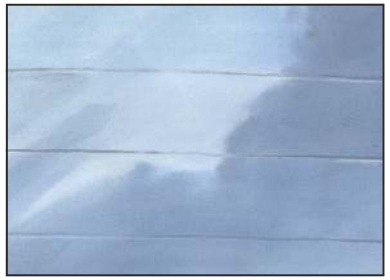
Compositing mode in which an image`s alpha channel [Black] (=0) will be set to transparent and [White] (=255) will be set to opaque.
This is normally used for layers that have [Gray Trace] images, vector format images (CEL format), and Overlay"Books" read in.



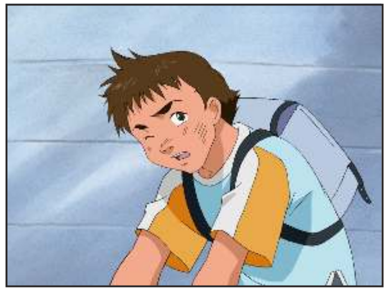
[Gray Trace] image



(Same cel`s alpha channel structure)



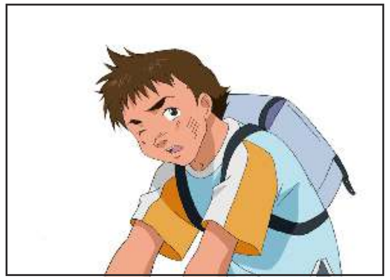
[Background]



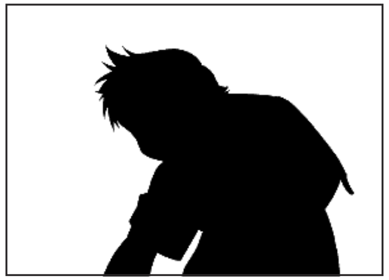
[Shooting effect]

Alpha channel (invert)

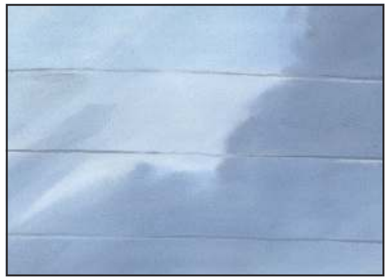
Compositing mode in which an image`s alpha channel [White] (=255) will be set to transparent and [Black] (=0) will be set to opaque. This is normally used for layers that have overlay "Books" read in.
* Whether [Alpha Channel] or [Alpha Channel (Invert)] should be used will depend on the image`s alpha channel condition.



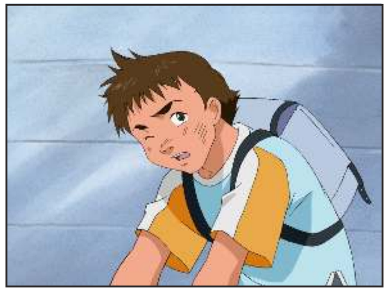
[Gray Trace] image



(Same cel`s alpha channel structure)



Background



Shooting effect

Completely opaque

Compositing mode in which the image`s transparent part will not be created, and the image will be made completely opaque. Even when an alpha channel is present, it will be ignored. This is normally used for layers that have [Backgrounds] read in.

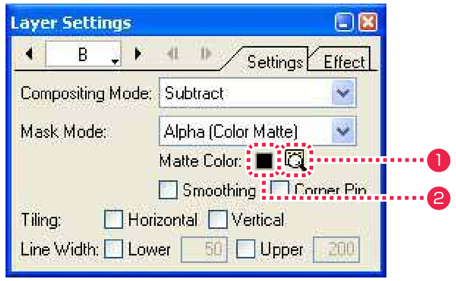
POINT

3D effect using alpha channel compositing

Images that have been output using 3D software will have an antialiasing effect added when they are drawn at high quality.
If these images are composited as normal white transparent, the boundaries (edge parts) will appear even more jagged.
In this situation, compositing should be carried out using alpha channel modes such as [Alpha Channel].

Alpha (color matte)

Compositing mode for use with vague images that have an airbrush-type effect and an ambiguous outline.
This mode is used by selecting the [Matte Color] that will become the standard using the buttons below the [Mask Mode] pop-up menu.



Layer Settings

B

Compositing Mode: Subtract

Mask Mode: Alpha (Color Matte)

Matte Color: ■

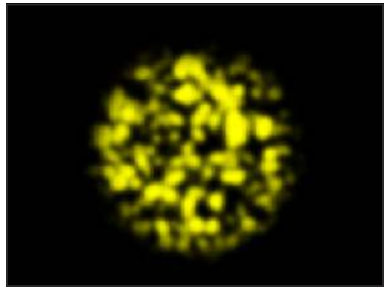
☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

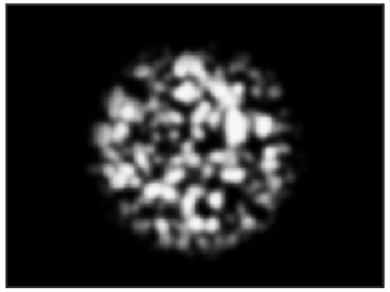
Line Width: ☐ Lower 50 ☐ Upper 200

❶ Clicking the [Detect Matte Color] button will automatically select the [Matte Color] from the picture loaded at the top of the cel bank of the relevant layer.

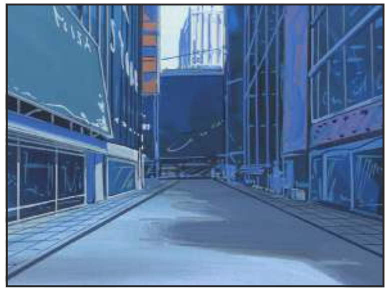
❷ Click the [Select Matte Color] to allow selection of an optional [Matte Color] from the palette.



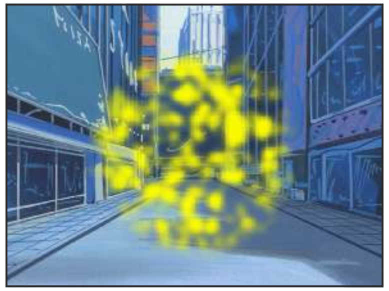
[Cel] RGB image



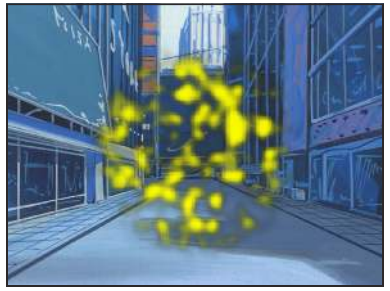
(Same cel`s alpha channel)



Background



[Alpha (Color Matte)] Shooting effect



Shooting result of above example using [Alpha Channel]

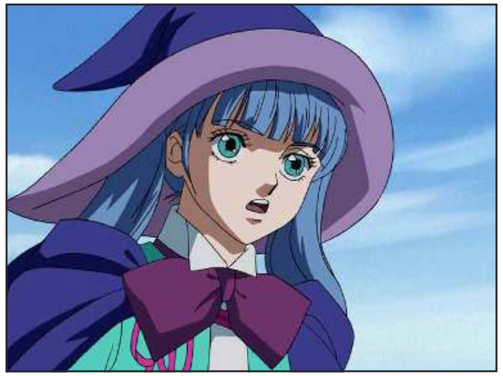
Step: 08 Compositing modes

In this step, an explanation is given about compositing modes.

Types of compositing modes

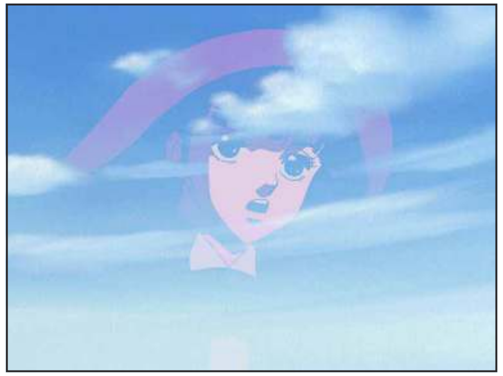
Here, an introduction is given about the types of layer setting compositing modes.

Normal



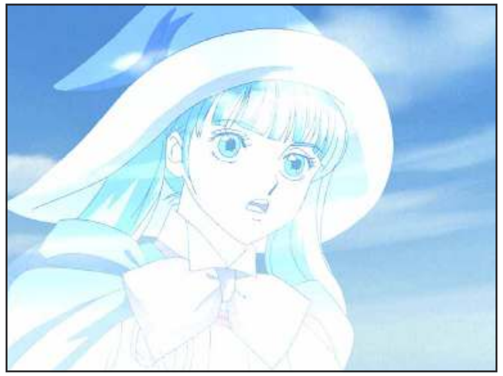
In [Normal] compositing mode, pixels that were set as opaque using [Mask Mode] in the "Layer Setting" palette are overlaid as opaque pixels on top of the compositing result of the layer below.

Lighter



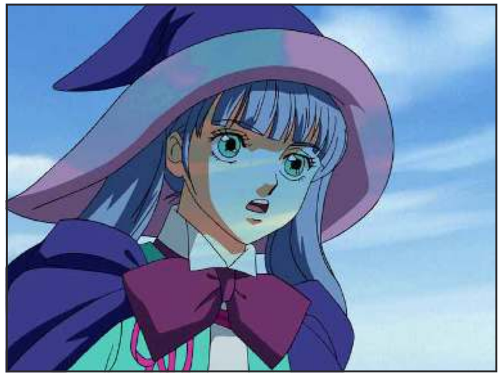
In the [Lighter] compositing mode, a comparison is made between the compositing result of the layer below and the pixels of the image itself, and the brighter pixel is applied.

Add



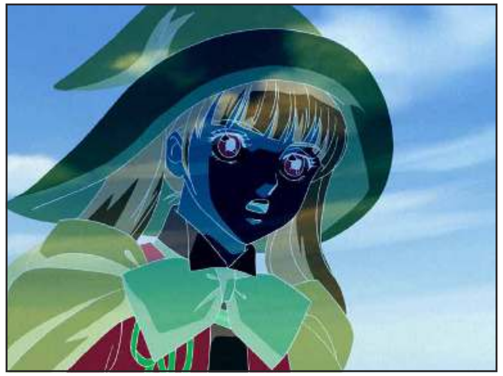
In [Add] compositing mode, the compositing original pixels are added to the compositing result of the layer below. Normally, the composited result will be brighter than the original colors. In this compositing mode, parts that are black will show no change.

Darker



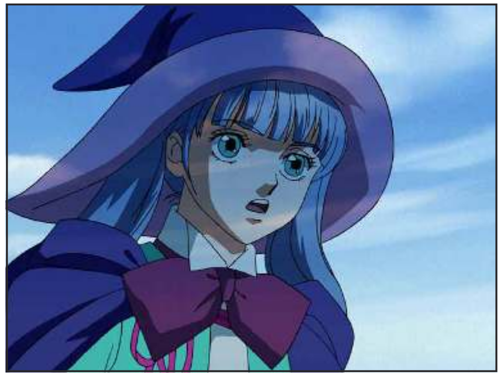
In the [Darker] compositing mode, a comparison is made between the compositing result of the layer below and the pixels of the image itself, and the darker pixel is applied.

Subtract



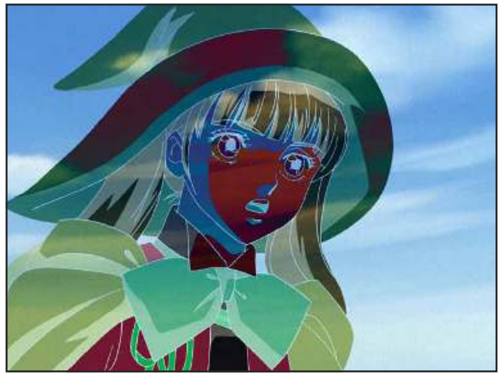
In the [Subtract] compositing mode, the pixels of the image itself are subtracted from the compositing result of the layer below. Normally, the composited result will be darker than the original color. In this compositing mode, parts that are black will show no change.

Multiply



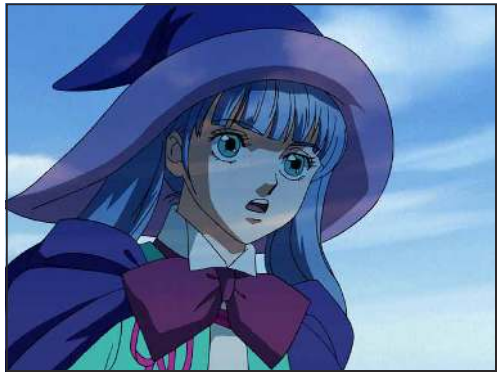
In the [Multiply] compositing mode, the pixels of the image itself are multiplied by the compositing result of the layer below, and the result is divided by 255 (when 8-bit). Normally, the composited result will be darker than the original. When this mode is applied to the same image, it will become slightly darker (underexposed).

Difference



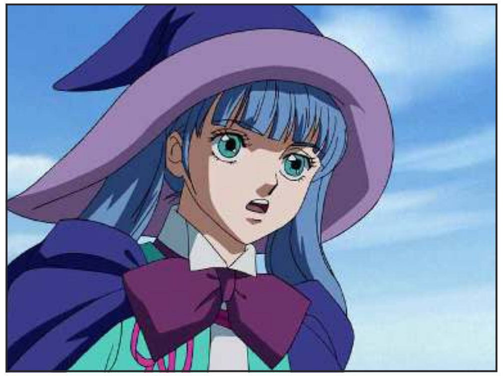
In the [Difference] compositing mode, the pixels of the image itself are subtracted from the compositing result of the layer below and this absolute value is applied.

Screen



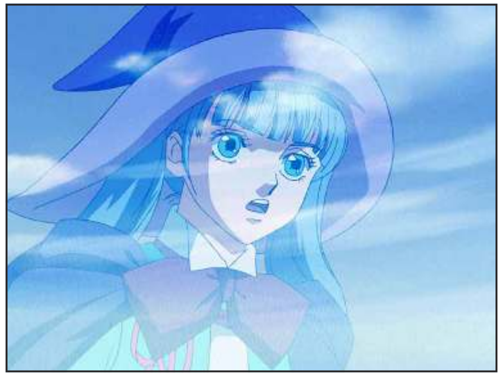
In the [Screen] compositing mode, the result of inversing the compositing result of the layer below is multiplied by the pixel colors of the image itself. Normally, the composited result will be lighter than the original. In this compositing mode, parts that are black will show no change, and parts that are white will become completely white.

Backlight



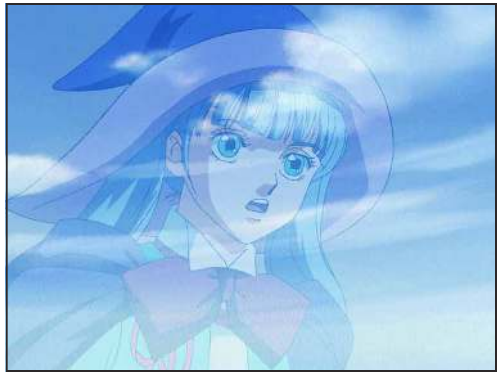
In the [Backlight] compositing mode, the pixel colors of the image itself are overlaid as [Backlighting] on top of the compositing result of the layer below.

Overlay



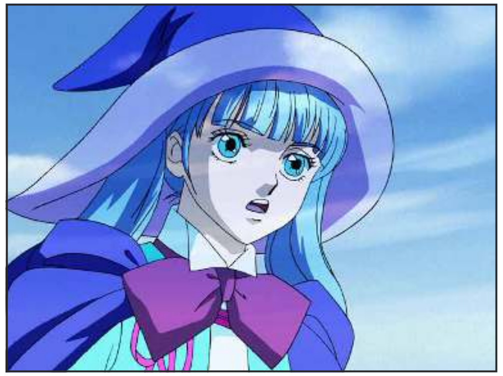
In the [Overlay] compositing mode, regarding the pixel colors of the compositing result of the layer below, the image itself is multiplied or screen compositing carried out. In this processing, the highlights and shadows of the layer below will remain, with the patterns and colors overlaid. The colors of the layer below will be mixed with those of the image itself, reflecting the brightness or darkness of the basic colors.

Soft light



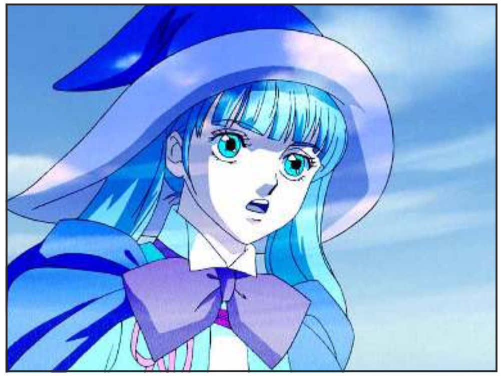
In the [Soft Light] compositing mode, regarding the pixel colors of the image itself, the pixel brightness of the compositing result of the layer below is changed.
When the pixel color is brighter than 50% luminosity gray, the brightness will be increased using a dodge-like effect.
When the pixel color is darker than 50% luminosity gray, the brightness will be decreased using a burn-like effect.

Hard light



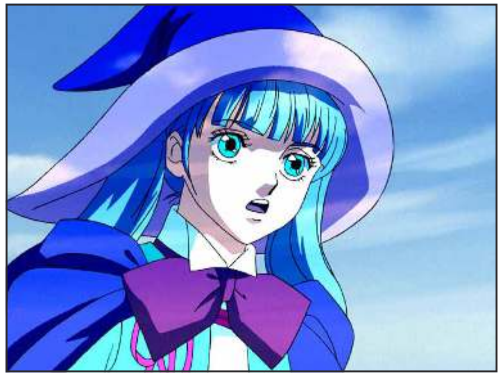
In the [Hard Light] compositing mode, regarding the pixel colors of the image itself, the compositing result of the layer below is multiplied or screen composited.
When the pixel color is brighter than 50% luminosity gray, the brightness will be increased as though screen compositing has been carried out.
When the pixel color is darker than 50% luminosity gray, the brightness will be decreased as though multiplying has been carried out.

Vivid light



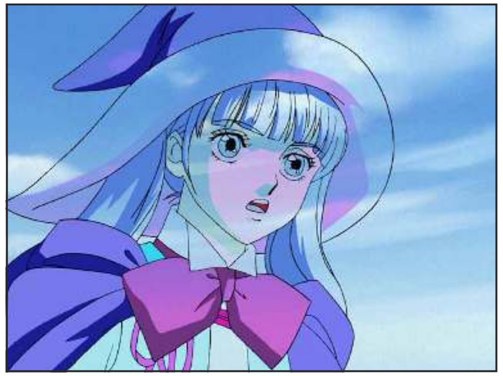
In the [Vivid Light] compositing mode, regarding the pixel colors of the image itself, the contrast is changed and the compositing result of the layer below has burn or dodge applied.
When the pixel color is brighter than 50% luminosity gray, the contrast is reduced and brightness increased.
When the pixel color is darker than 50% luminosity gray, the contrast is increased and brightness decreased.

Linear light



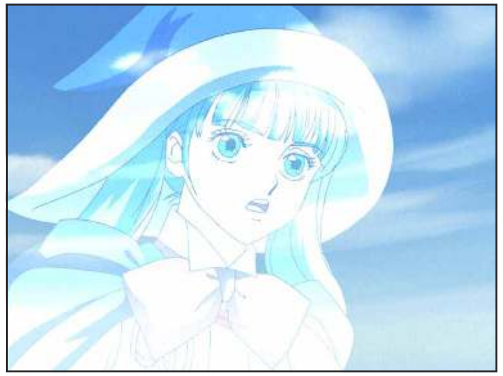
In the [Linear Light] compositing mode, regarding the pixel colors of the image itself, the brightness is changed and the compositing result of the layer below has burn or dodge applied.
When the pixel color is brighter than 50% luminosity gray, the luminosity is increased and brightness increased.
When the pixel color is darker than 50% luminosity gray, the luminosity is decreased and brightness decreased.

Pin light



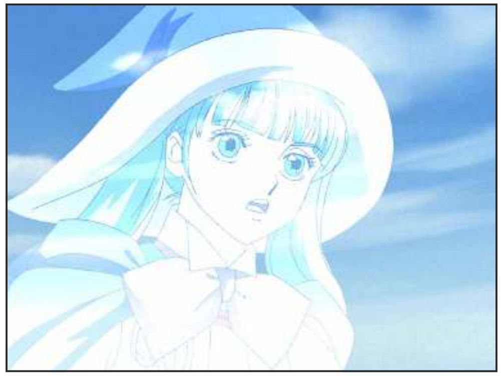
In the [Pin Light] compositing mode, regarding the pixel colors of the image itself, the colors of the compositing result of the layer below will be color replaced.
When the pixel color is brighter than 50% luminosity gray, darker pixels in the compositing result of the layer below will be color replaced.
When the pixel color is darker than 50% luminosity gray, lighter pixels in the compositing result of the layer below will be color replaced.

Dodge



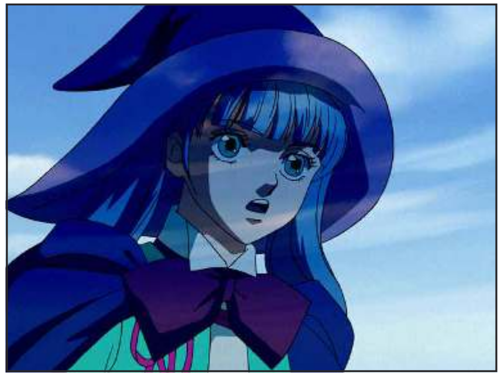
The [Dodge] compositing mode, like the [dodging] technique used in silver chloride photography, brightens the pixel colors and weakens the contrast of the compositing result of the layer below. In this compositing mode, parts that are black will show no change.

Dodge (linear)



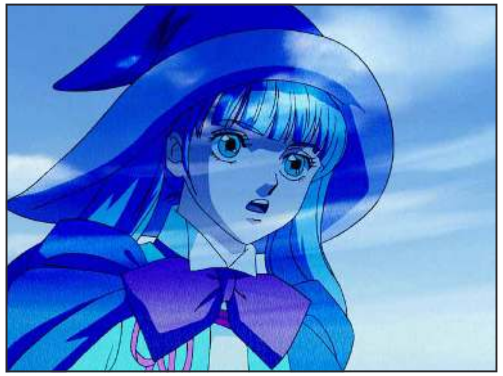
The [Dodge (Linear)] compositing mode, like the [dodging] technique used in silver chloride photography, brightens the pixel colors and increases the luminosity of the compositing result of the layer below. In this compositing mode, parts that are black will show no change.

Burn (linear)



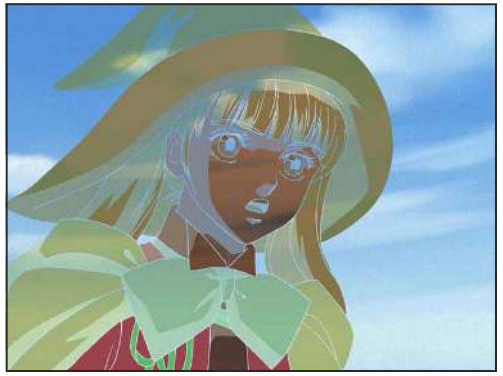
The [Burn (Linear)] compositing mode, like the [burning] technique used in silver chloride photography, darkens the pixel colors and decreases the luminosity of the compositing result of the layer below. In this compositing mode, parts that are white will show no change.

Burn



The [Burn] compositing mode, like the [burning] technique used in silver chloride photography, darkens the pixel colors and strengthens the contrast of the compositing result of the layer below. In this compositing mode, parts that are white will show no change.

Exclusion



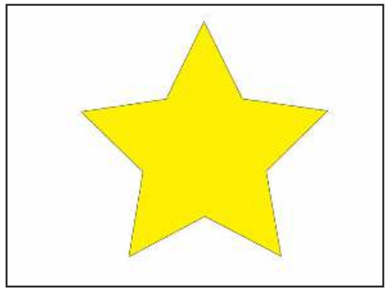
The [Exclusion] compositing mode is similar to [Difference] Compositing, but gives a softer effect.
When applied to the same image, while the mid-tones will be shown as their original colors, other colors will be darker.

Features of add compositing

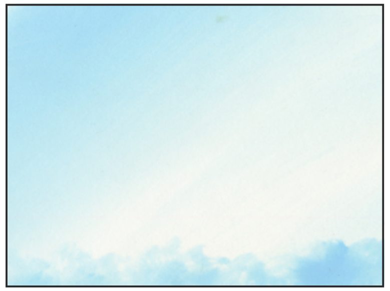
[Add] Compositing, like [Backlight] Compositing, is a compositing mode appropriate for expressing lighting effects.
In these compositing modes that add two image pixel values, an effect will be realized that is similar to a double exposure (superimposition) in film shooting. However, as with film shooting, some caution points must be observed.

1. Do not use with bright backgrounds.
2. Materials that are to be add composited to backgrounds should not be too bright.

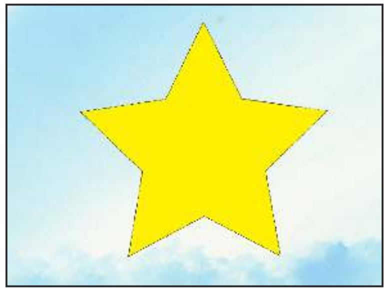
If the materials or backgrounds are too bright, the result of the add compositing will exceed 255 and will be shown as completely white.
Further, if lighting materials are placed on a bright background, the lighting effect will not be seen.



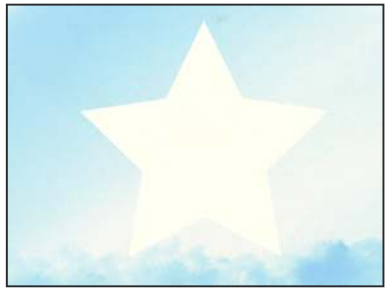
[Cel]



[Background]



[Normal] Compositing effect



[Add] Compositing effect

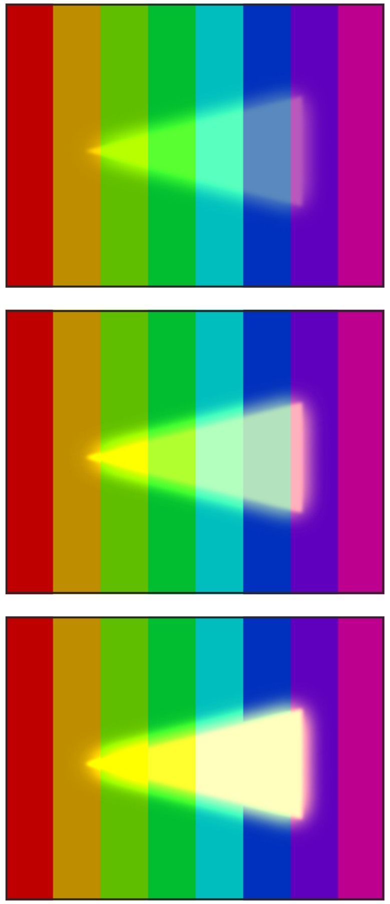
In the above example, the picture added to the bright background part will be saturated (exceed 255) and will appear white.
Addition will be carried out in each of the RGB channels. When the result of the addition exceeds 255, the part will be omitted and a brighter setting will not be possible.

Difference between add compositing and backlight compositing

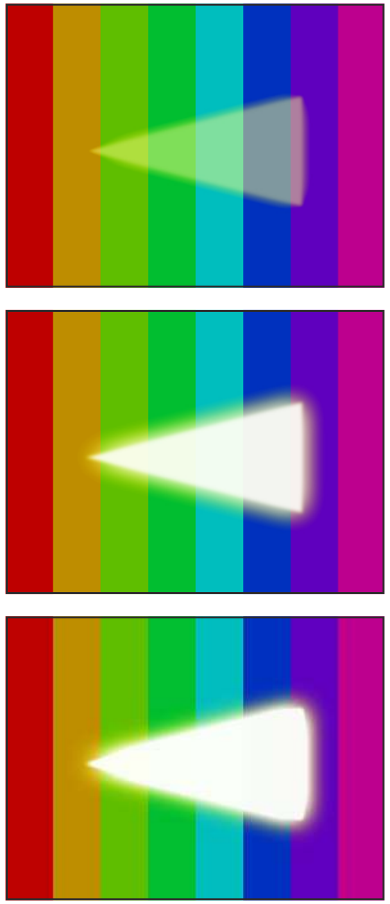
Here an explanation is given of the difference between the lighting that can be expressed using [Add] Compositing and the lighting that can be expressed using [Backlight] Compositing.

Transparent light add compositing

The left hand examples show the effect of changing the transparency in [Add] Compositing.
The right hand examples show the effect of changing the light strength in [Backlight] Compositing.



[Add] Compositing effect



[Backlight] Compositing effect

In [Backlight] Compositing, when the lighting is weak the specified flare will not spread much.
In [Add] Compositing, because it will be necessary to add flare beforehand to the compositing materials, the flare set to the materials will be the same strength as the flare of the back lighting.

In [Backlight] Compositing, the transparency of the background will be lost as the lighting becomes stronger. However, in [Add] Compositing the influence of the background will remain to the end.

Accordingly, when using [Add] Compositing, strengthening the light will result in changing the triangular shape as shown in the left hand examples.

As shown above, because [Add] Compositing will be easily affected by the background image that it will be composited with, it will be effective for expressing weak transparent lighting.
When expressing lighting effects using CoreRETAS HD, the processing methods should be selected to match the lighting image.

Step: 09 Smoothing

In this step, an explanation is given about smoothing.

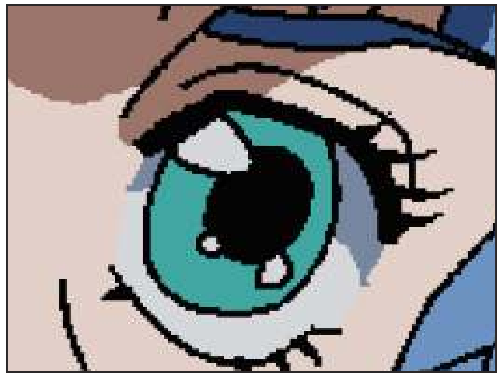
[Smoothing] is the processing that corrects the jagged edges of [Mono Trace] lines by changing them to lines with smoothed graduations. It is generally known as [Antialiasing].
In the smoothing in CoreRETAS HD, the contrast of the outlines is detected and correction is only applied to parts that have jagged edges. Accordingly, [Smoothing] is a completely different process from applying blur to an image or the [Spread] that appears in an image when changing the resolution.

Automatic application of smoothing

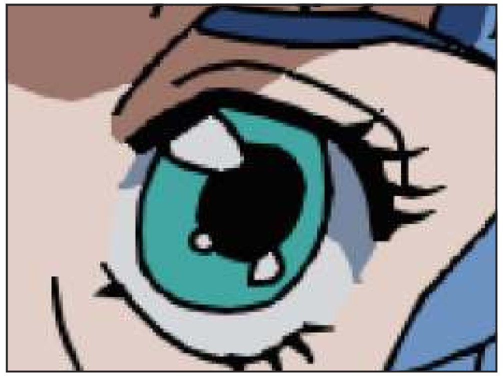
Normally, when the [Smoothing] check box of the [CAM] layer in the [Layer Setting] palette is set to "On", [Smoothing] is applied to the whole compositing result all together.
However, because [Smoothing] processing is carried out based on the contrast of the image, smoothing will not be applied to the spread of lines that occurs when enlarging or reducing [Mono Trace] images, and the quality will be degraded.

To alleviate this, when enlarging or reducing images, by applying [Smoothing] to individual layers other than the [CAM] layer using their check boxes, the enlargement and reduction processing applied after conducting [Smoothing] will be completed without degrading the accuracy.

However, because it is troublesome to individually set each layer, it is recommended that when carrying out export, [Smoothing] in the [Rendering Setting] dialog box should normally be set to [Auto] or [All].



Enlargement of the [A] cel when [Smoothing] was only applied to the [CAM] layer.
([Rendering Settings] = [Layer Settings])



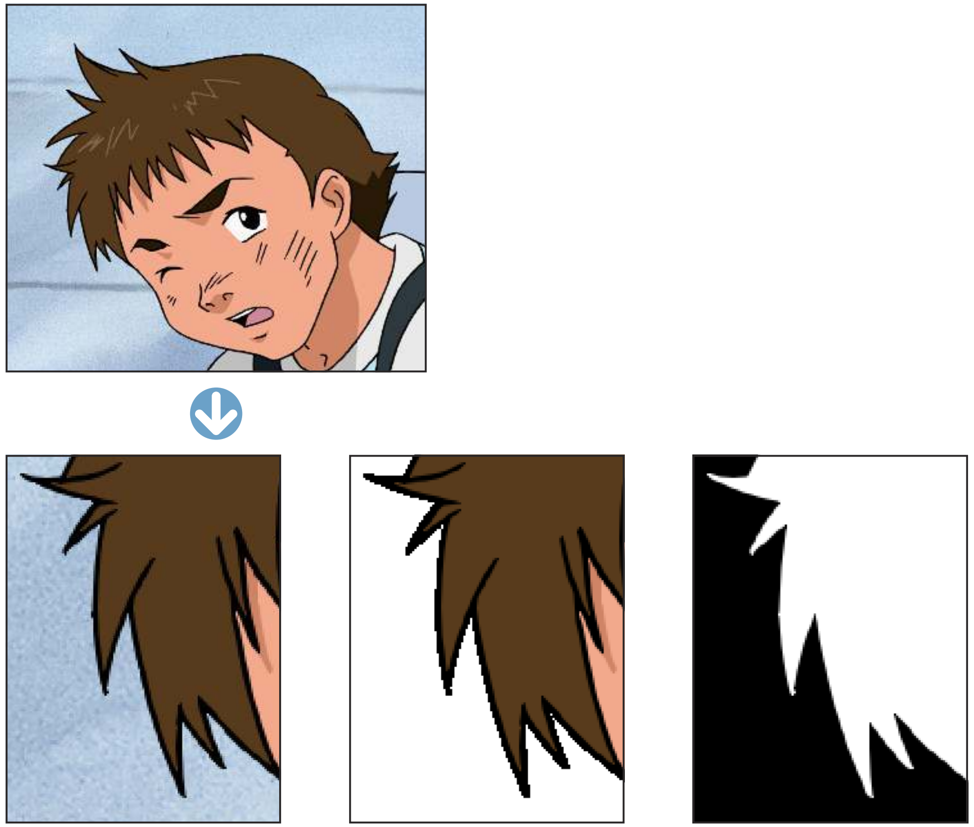
Enlargement of the [A] cel when [Smoothing] was applied to the [CAM] layer and [A] layer.
([Rendering Settings] = [Layer Settings])

About edge smoothing

In CoreRETAS HD, images are always exported as 32 bit files with alpha channels. Smoothing (antialiasing) processing of the edges in images will be carried out on the alpha channel, and smoothing (antialiasing) will not be conducted on the edges in the RGB plane images.

Accordingly, in the situation where there is no picture below the [Cel] (mono trace image or gray trace image), the rendering effect in the [Rendering] window will appear as though smoothing (antialiasing) has not been applied to the edges. However, since the smoothing (antialiasing) is applied to the alpha channel, by applying mask compositing together with the alpha channel, the correct result will be obtained.

Edges can be confirmed using the [Rendering] window.



When [Background is Present] When [No Background is Present] Alpha Channel

In normal animation scenes, a [Background] will always be present. There will be no situations where there is no image behind the character, so the problem will not occur in the majority of situations.

Step: 10

3D camera work

In this step, an explanation is given about 3D camera work.

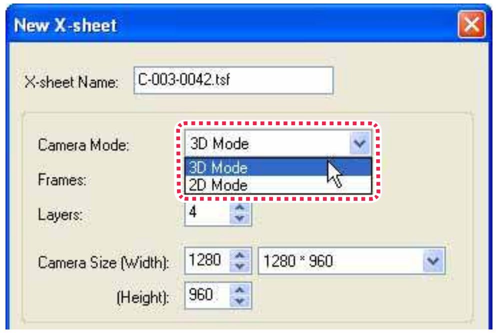
About 3D camera work

In CoreRETAS HD, it is possible to move and rotate a plane in three-dimensional space.

3D X-sheets

Creating 3D X-sheets

When using 3D camera work, [3D X-sheets] should be created by setting the [Camera Mode] in the [New X-sheet] dialog box to [3D Mode].



New X-sheet

X-sheet Name: C-003-0042.tsf

Camera Mode: 3D Mode

3D Mode
2D Mode

Frames:

Layers: 4

Camera Size (Width): 1280 1280 * 960

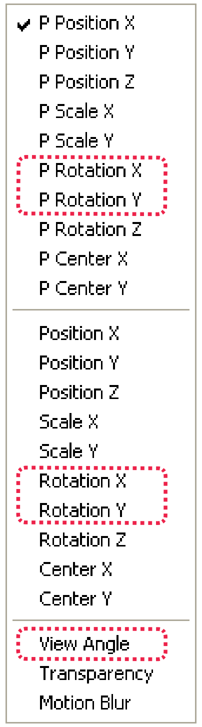
(Height): 960

It will also be possible to change a [2D X-sheet] to a [3D X-sheet] afterwards.
Select [X-sheet Setting] -> [General...] from the [X-sheet] dialog box to show the [X-sheet Settings] dialog box, and set the [Camera Mode] to [3D Mode].

3D X-sheet parameters

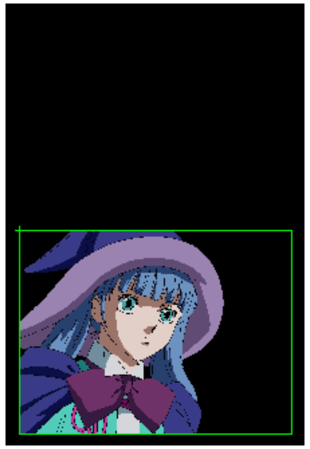
In the [3D X-sheet], the [P Rotation X], [P Rotation Y], [Rotation X], [Rotation Y], and [View Angle] parameters will be enabled for use.

The [2D X-sheet] [P Rotation] and [Rotation] will be shown as [P Rotation Z] and [Rotation Z].

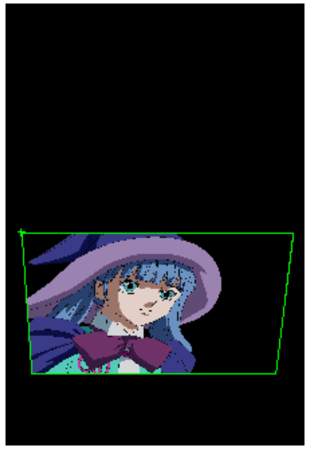

✓ P Position X
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation X
P Rotation Y
P Rotation Z
P Center X
P Center Y
Position X
Position Y
Position Z
Scale X
Scale Y
Rotation X
Rotation Y
Rotation Z
Center X
Center Y
View Angle
Transparency
Motion Blur

X-axis rotation

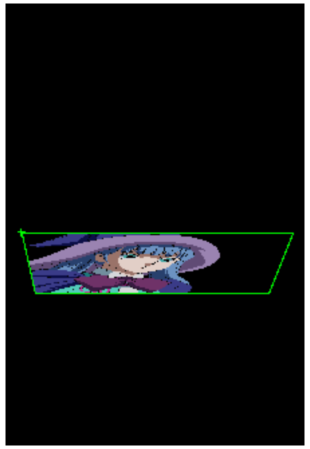
[P Rotation X] and [Rotation X] will conduct rotation centered on the X-axis.



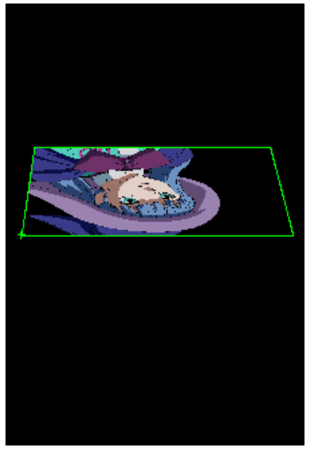
[P Rotation X] 0°



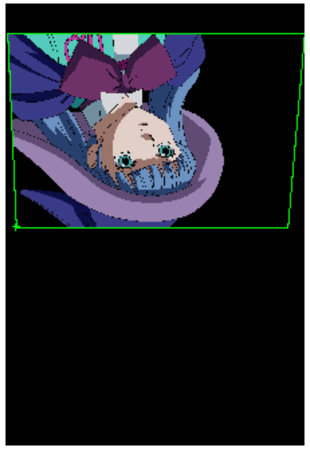
[P Rotation X] 40°



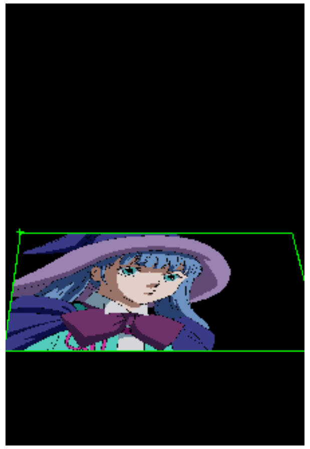
[P Rotation X] 70°



[P Rotation X] 120°



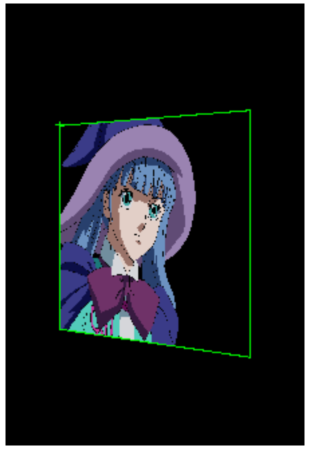
[P Rotation X] 210°



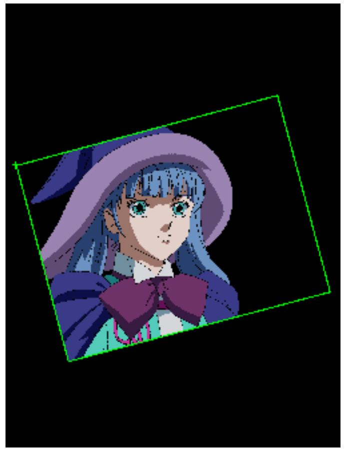
[P Rotation X] 300°

Y-axis rotation and Z-axis rotation

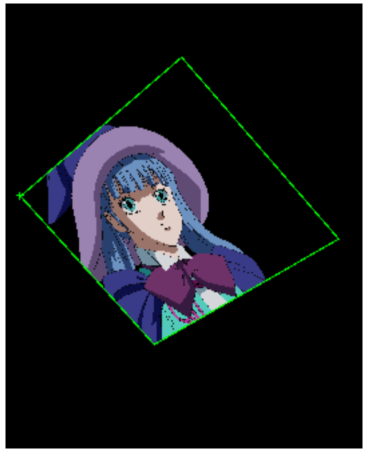
As with the X-axis, the [P Rotation Y] and [Rotation Y] will conduct rotation centered on the Y-axis.
The [P Rotation Z] and [Rotation Z] will conduct rotation centered on the Z-axis.



[P Rotation Y] 50°



[P Rotation Z] -15°



[P Rotation X] 40° [P Rotation Y] 30° [P Rotation Z] -50°

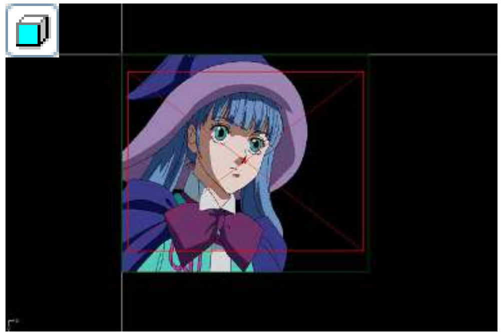
The four view of the stage window

When using [2D X-sheets], all of the images (layers) and [Cameras] will be parallel and upright. However, when using [3D X-sheets], since it will be possible to use depth, viewing only from the front (Z-axis) will not always allow correct understanding of the arrangement situation.
In this situation, it is possible not only to view the stage from the [Front], but also from the [Top] and the [Side], allowing correct understanding of the arrangement situation.

In the [Stage] window there are three buttons; the [Front] view, [Top] view, and [Side] view, that will allow viewing of the layers from the optional directions of the X-axis, Y-axis, and Z-axis.
Further, in [Camera] view, the layer arrangement can be viewed from the viewpoint of the camera layer that is set.

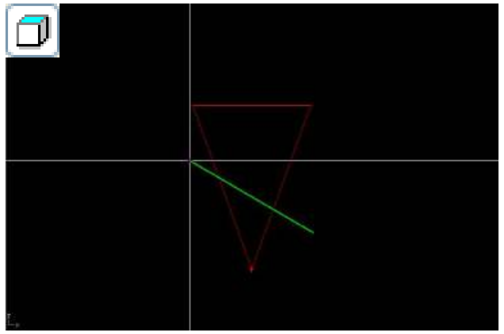
Front view

Condition in which the stage is viewed from the front (Front face, Z-axis direction). The default setting is this condition.



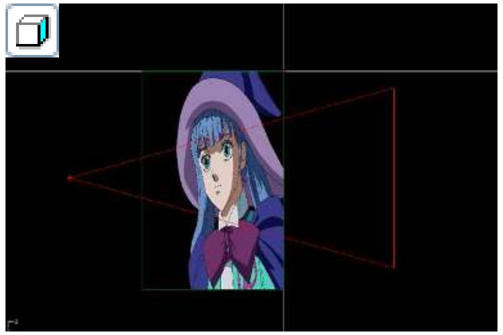
Top view

Condition in which the stage is viewed from the top (Top face, Y-axis direction).



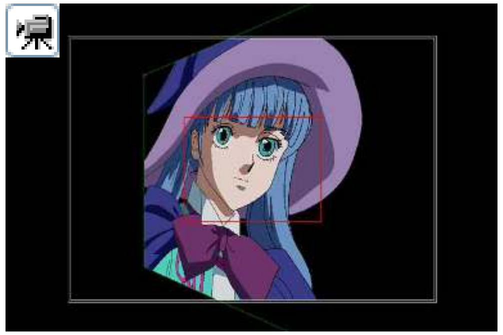
Side view

Condition in which the stage is viewed from the side (Side face, X-axis direction).



Camera view

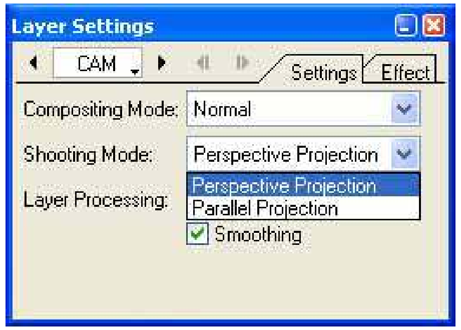
Condition in which the stage is viewed from the camera position.
Only the [Camera] view is capable of confirming the perspective (explained below).



Perspective viewing

In the [3D X-sheet], when carrying out rotations centered on the X-axis and Y-axis, it will be possible to apply perspective to the composited result. Further, depending on the purpose, it is sometimes required to view the result without perspective, and in this case viewing without perspective will be possible. The perspective on/off view may be set for each [Camera Layer].

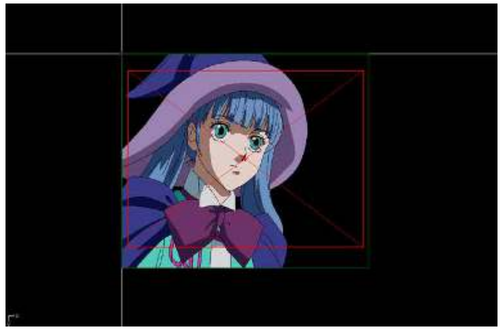
Selecting [CAM] layer (camera layer) in the [Layer Settings] palette will allow selection of the viewing mode from the [Shooting Mode] pop-up menu.



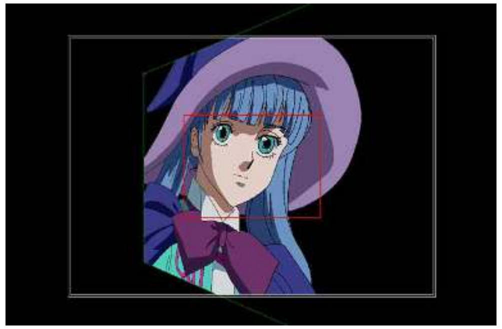
Compositing Mode: Normal
Shooting Mode: Perspective Projection
Layer Processing:
☑ Smoothing

- [Perspective Projection]
  Viewing with perspective.

- [Parallel Projection]
  Viewing without perspective.



[Front] view

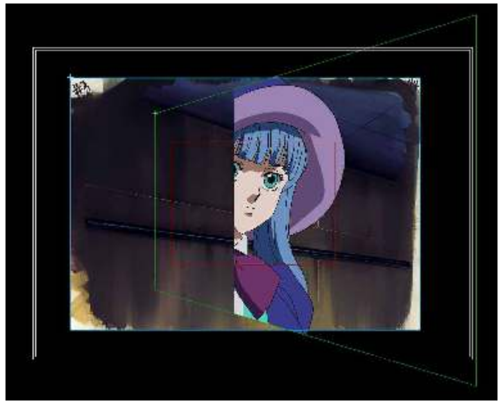


[Camera] view

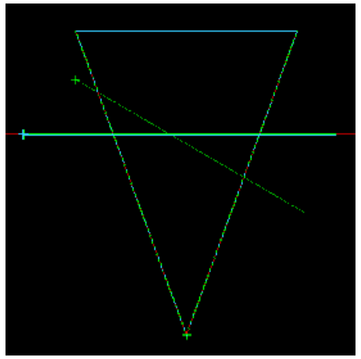
The above figure shows an image that has a 30° inclination in the Y-axis. However, if only [Perspective Projection] is set, it will not be possible to confirm the perspective on the stage.
By setting [Perspective Projection] together with [Camera] view, it will be possible to carry out operations while showing the perspective view on the stage.

Layer processing

In [3D X-sheets], depending on the rotation direction, there will be situations where a plane will sink below another plane.

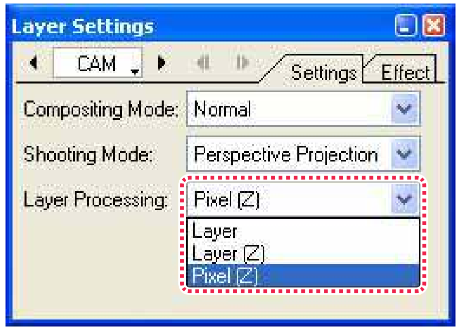


[Camera] view



[Top] view

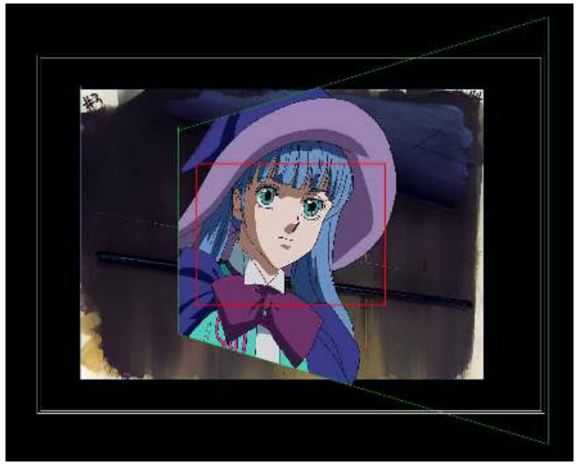
In this situation, by setting [Layer Processing] in the [Layer Settings] palette, it will be possible to achieve different viewing results.



Compositing Mode: Normal
Shooting Mode: Perspective Projection
Layer Processing: Pixel (Z)

When layer processing [Layer] is selected

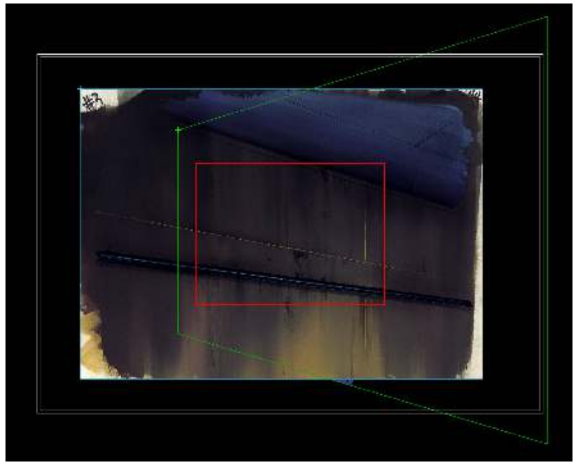
Layer processing will be carried out following the layering order of the layers specified in the X-sheet. Higher order layers (on the right side of the X-sheet) will be shown as whole planes above, and lower order layers (on the left side of the X-sheet) will be shown as whole planes below.



Because the layer order processing will be carried out in layer units, even in the situation where part of a layer sinks into another layer, this type of partly [Hidden Effect] will not be implemented in the rendered image.

When layer processing [Layer (Z)] is selected

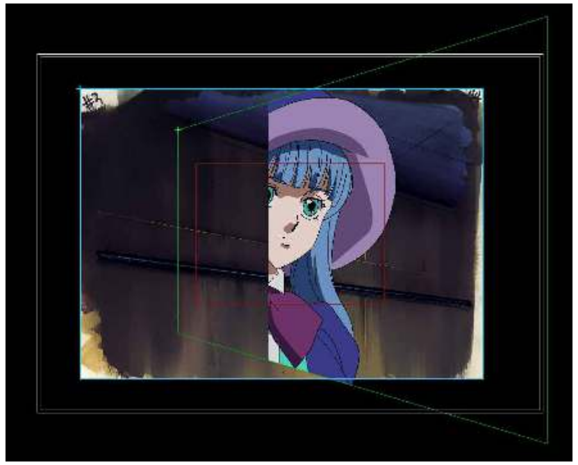
Layer processing will be carried out following the Z-coordinate ([Position Z]) of the center of the layer.
In this case, even if a layer is positioned higher on the X-sheet, if the [Position Z] coordinate is set further away, the whole plane will be shown below.



Because the layer order processing will be carried out in layer units, even in the situation where part of a layer sinks into another layer, this type of partly [Hidden Effect] will not be implemented in the rendered image.

When layer processing [Pixel (Z)] is selected

Layer processing will be carried out following the Z-coordinates of each of the pixels in the layer.

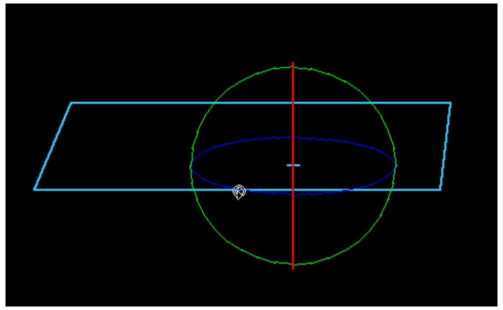


Because the layer order processing will be carried out in pixel units, for the parts of a layer that sink into another layer due to the layer rotation, the pixels of the sunken part will be rotated below the surface, and the pixels of the layer part that are on top will be displayed.

Manipulator

When carrying out [Move] and [Rotate] of a pegbar (or layer) that is shown at a complicated angle in the [Stage] window, the manipulator is a convenient function that allows dragging operations to be conducted only in particular directions without switching the display.
Although the function can also be used with [2D X-sheets], it is particularly convenient when using [3D X-sheets].

Setting the [Stage] menu [Show Manipulator] command to the "On" condition will cause the [Manipulator] to be shown in the [Stage] window.

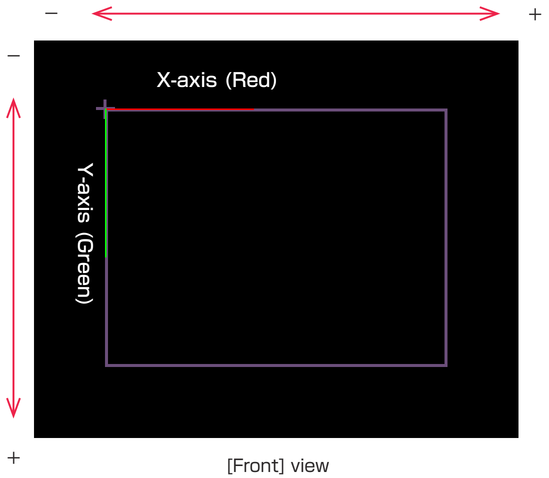


Ex.: [Manipulator] when using the [Rotate] tool

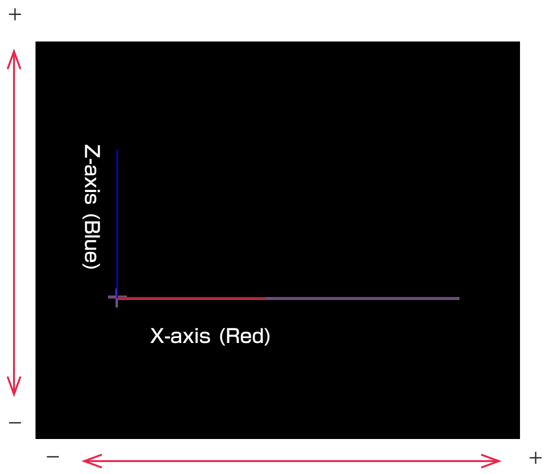
The [Manipulator] display method will be different depending on the type of tool that is selected in the [Stage] window.
In this example, the [Move] and [Rotate] tools will be explained as representative tools.

Manipulator when using the move tool

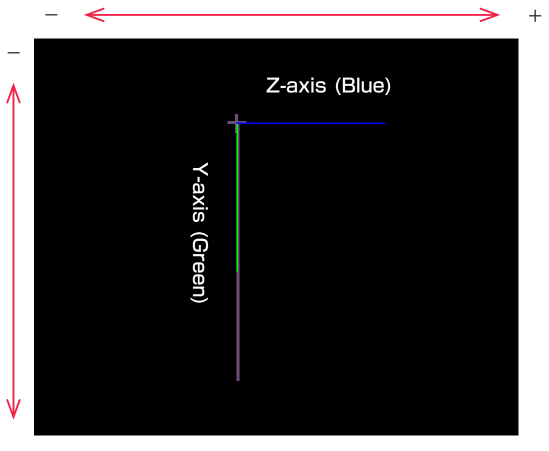
By selecting the [Move] tool in the [Show Manipulator] condition, straight lines will be shown from the pegbar center, with a red line pointing in the [X Direction], a green line in the [Y Direction], and a blue line in the [Z Direction].



[Front] view

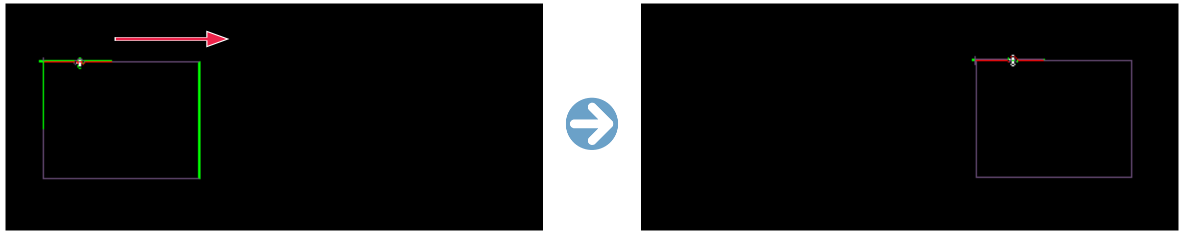


[Top] view



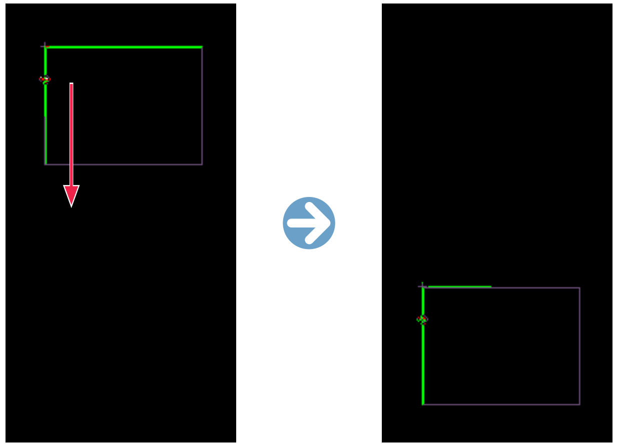
[Side] view

X-axis direction movement (front view)



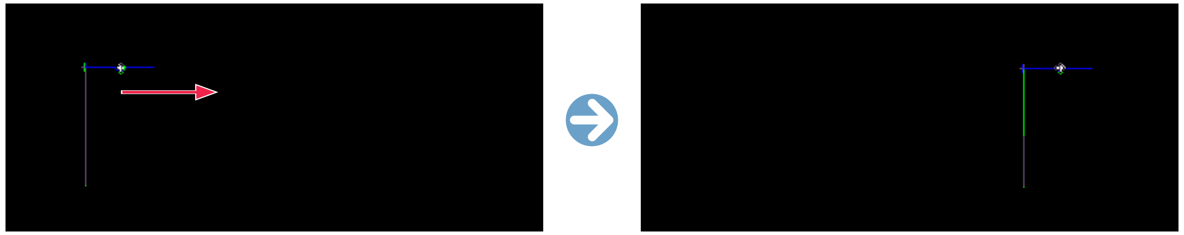
By dragging the red line (Manipulator) that extends in the X-axis direction, it will be possible to carry out [Movement] restricted to only the X-axis direction.

Y-axis direction movement (front view)



By dragging the green line (Manipulator) that extends in the Y-axis direction, it will be possible to carry out [Movement] restricted to only the Y-axis direction.

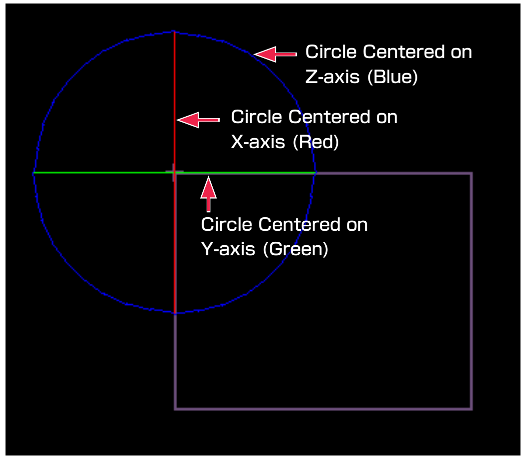
Z-axis direction movement (side view)



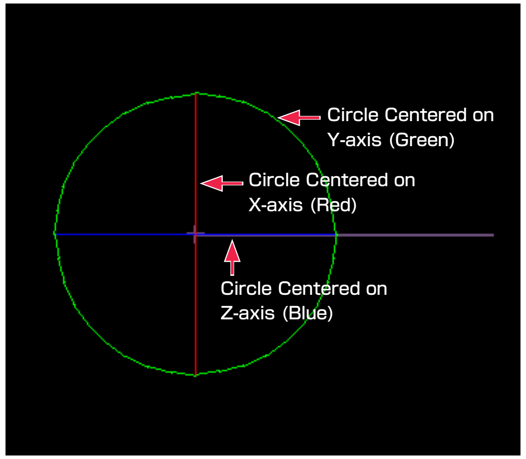
By dragging the blue line (Manipulator) that extends in the Z-axis direction, it will be possible to carry out [Movement] restricted to only the Z-axis direction.

Manipulator when using the rotate tool

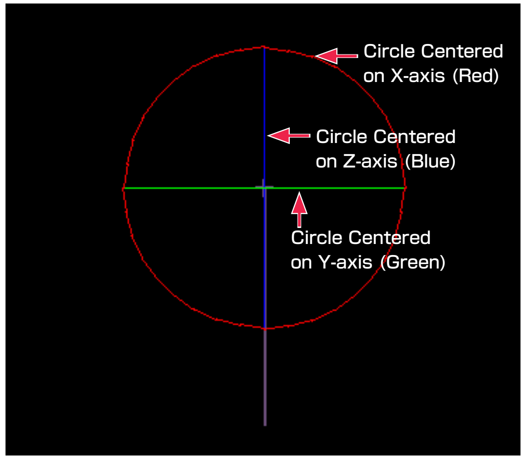
By selecting the [Rotate] tool in the [Show Manipulator] condition, circles will be shown around the pegbar (or layer) center point, with a red circle [X-axis Center], a green circle [Y-axis Center], and a blue circle [Z-axis Center].


Circle Centered on Z-axis (Blue)
Circle Centered on X-axis (Red)
Circle Centered on Y-axis (Green)

[Front] view


Circle Centered on Y-axis (Green)
Circle Centered on X-axis (Red)
Circle Centered on Z-axis (Blue)

[Top] view

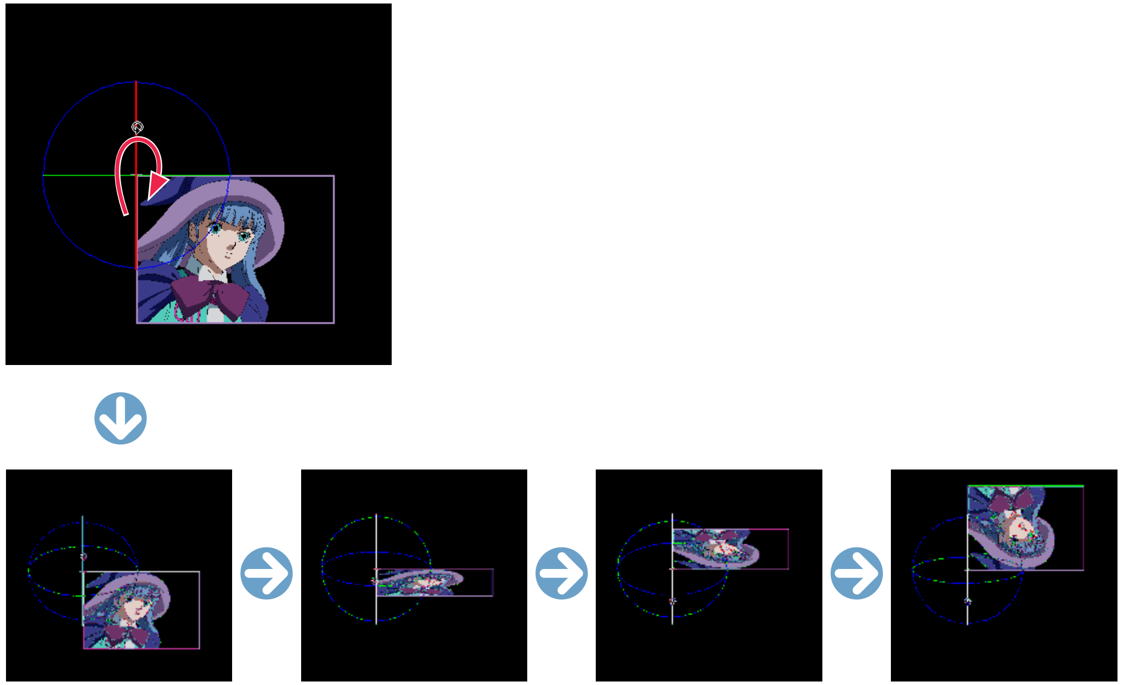

Circle Centered on X-axis (Red)
Circle Centered on Z-axis (Blue)
Circle Centered on Y-axis (Green)

[Side] view

Rotation around X-axis center (front view)

By dragging the red circle (Manipulator) that is centered on the X-axis center, [Rotation] centered on the X-axis will be carried out.

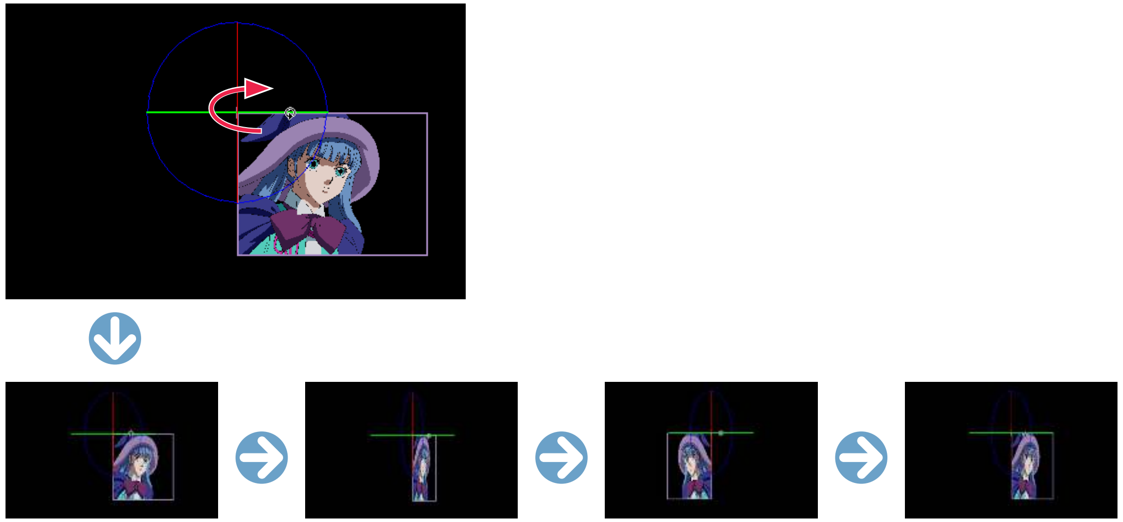
(The [P Rotation X] or [Rotation X] value will change)



Rotation around Y-axis center (front view)

By dragging the green circle (Manipulator) that is centered on the Y-axis center, [Rotation] centered on the Y-axis will be carried out.

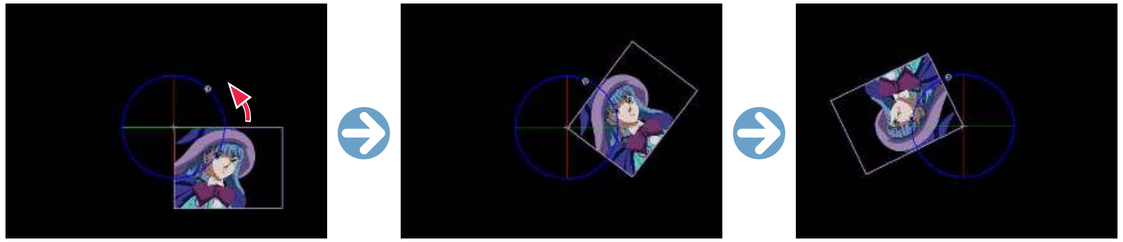
(The [P Rotation Y] or [Rotation Y] value will change)



Rotation around Z-axis center (front view)

By dragging the blue circle (Manipulator) that is centered on the Z-axis center, [Rotation] centered on the Z-axis will be carried out.

(The [P Rotation Z] or [Rotation Z] value will change)



POINT

The camera layer cannot be operated in camera view

In [Camera] view, the [Camera Layer] of the [Camera] view itself, or the pegbar itself, cannot be operated using the Manipulator.

Step: 11

Color planes

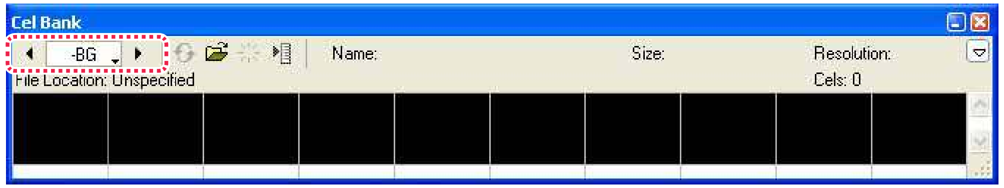
In this step, an explanation is given about color planes.

Creating a color plane

It will be possible to load images to the [Cel Bank] in which the complete plane has been filled with a single color (color planes).

1. Selecting the cel bank

Select [Cel Bank] from the [Window] menu to show the [Cel Bank] palette.



Cel Bank

-BG

Name:

Size:

Resolution:

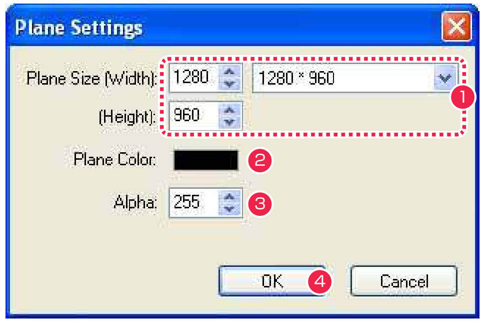
File Location: Unspecified

Cels: 0

Using the [Select Cel Bank] button, select the [Cel Bank] in which the [Color Plane] is to be loaded.

2. Setting the color plane

Select [Cel Bank] -> [Load Plane...] from the [X-sheet] menu to show the [Plane Settings] dialog box.



Plane Settings

Plane Size (Width): 1280 | 1280 * 960

(Height): 960

Plane Color:

Alpha: 255

OK

Cancel

① Set the plane [width] and [height].

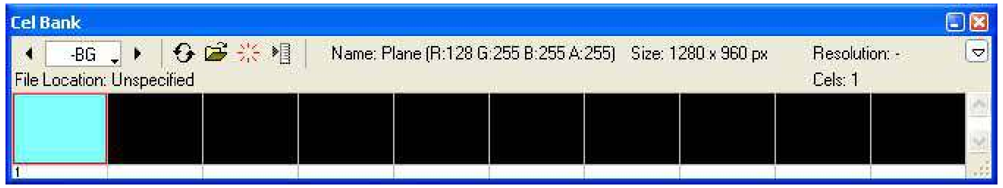
② Set the color for filling the plane surface.

③ Set the transparency (alpha).

④ Clicking the [OK] button will load the [Color Plane] to the [Current Cel Bank].

3. Completion of reading in

The [Color Plane] that was loaded is shown in the [Cel Bank] palette.



Cel Bank

-BG

Name: Plane (R:128 G:255 B:255 A:255) Size: 1280 x 960 px

Resolution: -

File Location: Unspecified

Cels: 1

The loaded [Color Plane] may be used in the same way as normal [Cel] images.
(Although it does not exist as a file on the disc, it is loaded in the X-sheet as a type of object)

* If the X-sheet that has the [Color Plane] loaded is saved in Ver.5 format, the loaded [Color Plane] will be deleted.

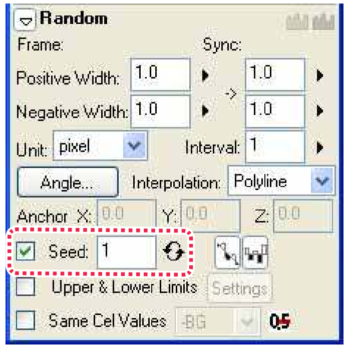
Changing the color plane

To change the size or color of a loaded [Color Plane], first select the [Cel Bank] palette. Then select [Cel Bank] -> [Plane Settings...] from the [X-sheet] menu. The [Plane Settings] dialog will be shown and changes can be made.
(The [Color Plane] cannot be edited in the [Cel] window)

Step: 12 Seeds

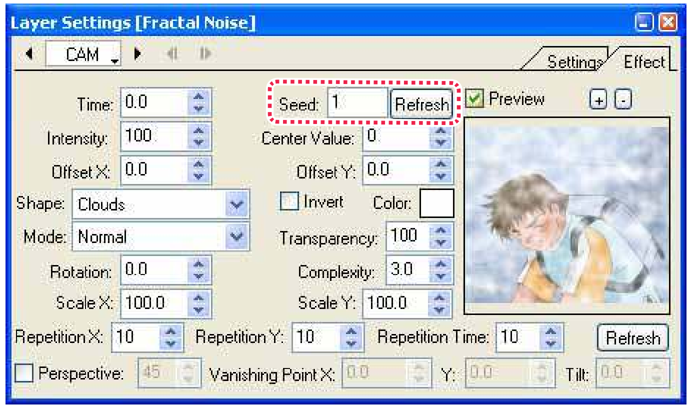
In this step, an explanation is given about seeds.

In [Inbetweening] and [Effects], there are options that allow use of random numbers.
(Such as [Random] in the [Inbetweening] palette, the [Fractal Noise] filter, etc.)



Random
Frame: Sync:
Positive Width: 1.0 -> 1.0
Negative Width: 1.0 -> 1.0
Unit: pixel Interval: 1
Angle... Interpolation: Polyline
Anchor X: 0.0 Y: 0.0 Z: 0.0
☑ Seed: 1
☐ Upper & Lower Limits Settings
☐ Same Cel Values BG 0.5

[Random] pane of the [Inbetweening] palette.



Layer Settings [Fractal Noise]
CAM Settings Effect
Time: 0.0 Seed: 1 Refresh ☑ Preview
Intensity: 100 Center Value: 0
Offset X: 0.0 Offset Y: 0.0
Shape: Clouds ☐ Invert Color:
Mode: Normal Transparency: 100
Rotation: 0.0 Complexity: 3.0
Scale X: 100.0 Scale Y: 100.0
Repetition X: 10 Repetition Y: 10 Repetition Time: 10 Refresh
☐ Perspective: 45 Vanishing Point X: 0.0 Y: 0.0 Tilt: 0.0

[Fractal Noise] effect in the [Layer Settings] palette.

When [Seeds] are not used, because the generated random numbers will be different each time rendering is applied, the rendering effect will not be uniform and a different result will be obtained each time the rendering is carried out.

When [Seeds] are used, because the random numbers generated by the [Seed] will follow fixed rules, the same result can be obtained however many times the rendering is carried out.

The [Seed] function should be used in situations where it will be a problem if the results of the random number generation are different each time rendering is carried out.

Chapter 5

Application description: special effects and camera effects

In this chapter, an explanation is given about special effects, shooting effects, and image editing.

Step:01 Using effects
Step:02 List of effects
Step:03 Back lighting
Step:04 Focus
Step:05 Motion blur effects
Step:06 Compositing mask processing
Step:07 Mask replacement
Step:08 Corner pin
Step:09 Tiling
Step:10 Line width control
Step:11 Nesting
Step:12 Parent-child pegbars
Step:13 Multi-camera
Step:14 RLA file reading
Step:15 Paraffin overlay and para multi
Step:16 Exposure effects
Step:17 Image editing

Step: 01

Using effects

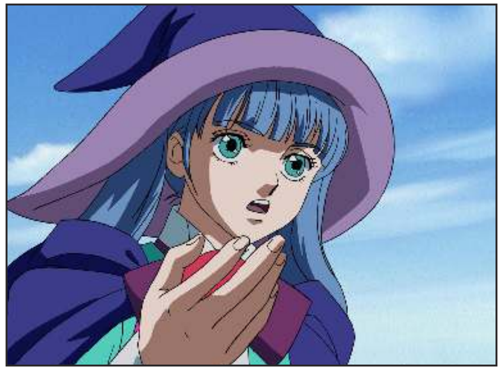
In this step, an explanation is given about the methods of using effects.

Applying effects

To apply special effects to an image, an effect layer is added to the layer and adjusted.

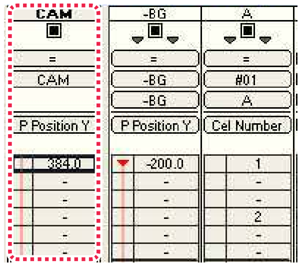
1.Preparing the X-sheet

Prepare an X-sheet in which loading of the materials images has been completed.



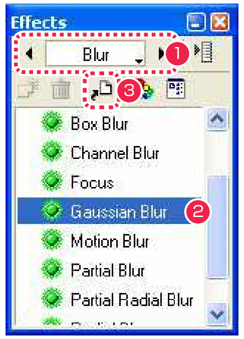
2.Selecting the layer

Select the layer from the X-sheet that is to have the effect applied.


CAM
=
CAM
P Position Y
384.0
-BG
=
-BG
-BG
P Position Y
-200.0
A
=
#01
A
Cel Number
1
2

3.Selecting the effect

Select [Effects] from the [Window] menu to show the [Effects] palette.


Effects
Blur
①
③
Box Blur
Channel Blur
Focus
Gaussian Blur
②
Motion Blur
Partial Blur
Partial Radial Blur

❶ Using the [Select Effect Category] menu, switch the effects category.

❷ Select the effect that is to be used.

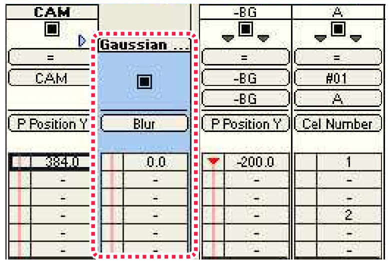
❸ Click the [Load Effect to Sheet] button.

POINT

It is also possible to add an effect using the following methods:
- Select a filter from the [Effects] palette, and drag and drop it on the X-sheet.
- Select [Add] from the [Effects] menu, and select the effect that is to be used from the category.

4. The effects layer is created

The effect layer will be created to the right side of the selected layer on the X-sheet (current layer).


CAM
=
CAM
P Position Y
384.0
Gaussian ...
Blur
0.0
-BG
=
-BG
-BG
P Position Y
-200.0
A
=
#01
A
Cel Number
1
2

5.Adding the effect mask image

Among the effects, some require mask images. For effect layers that require mask images, a [Select Cel Bank] menu will be provided.

Ex.: Image Distort

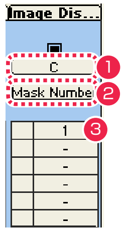


Image Dis...
C
①
Mask Numbe
②
1
③

❶ Select the cel bank in which the mask images have been loaded.

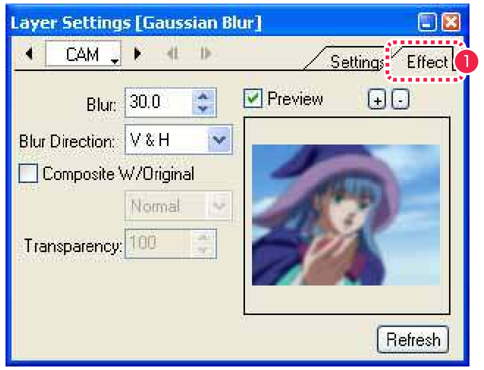
❷ Select the [Mask Number].

❸ Input the [Cel Number].

For the effect layer that requires a mask, the mark image loaded in the cel bank will be specified by the [Mask Number] parameter corresponding to the [Cel Number].

6. Adjusting the effects

Select [Layer Settings] from the [Window] menu to show the [Layer Settings] palette.

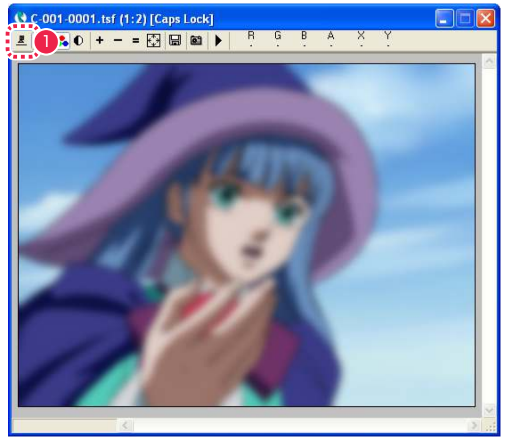

Layer Settings [Gaussian Blur]
CAM
Setting
Effect
①
Refresh

Blur: 30.0
☑ Preview
Blur Direction: V & H
☐ Composite W/Original
Normal
Transparency: 100

❶ Select the effect layer that is to be set in the X-sheet, then select the [Effect] tab of the [Layer Settings] palette to allow effect setting to be carried out.

7.Confirming the result of applying the special effect

Select [Rendering] from the [Window] menu to show the [Rendering] window.

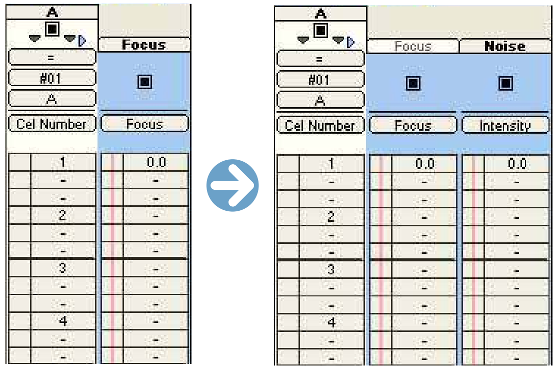

C-001-0001.tsf (1:2) [Caps Lock]
①
R G B A X Y

❶ Click the [Rendering] button at the top left to allow confirmation of the rendering result.

Adding several effects layers

By adding several effects layers to an image, it will be possible to realize even more complex special effects.

Select the layer that is to have the effects applied in the X-sheet, and select [Add] from the [Effects] menu. This will allow addition of the effects to be used from each category.
The added effect layer will be added to the right side of the cel layer.
In the situation where an effect layer is already present, the layer will be added to the right side of the currently selected effect layer.

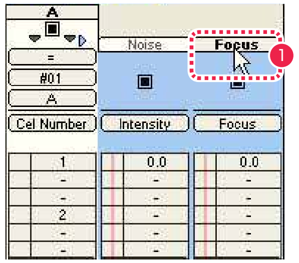


Swapping the order of the effect layers

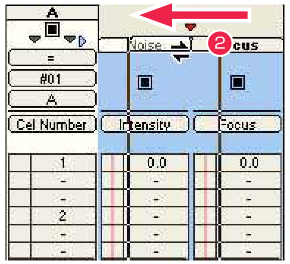
When effect layers are added, the loaded effect layers will be applied to the layer in order from left to right. Even with the same grouping of effect layers, swapping the order of the layers will give a different effect.

1. Adjusting the order of the effect layers

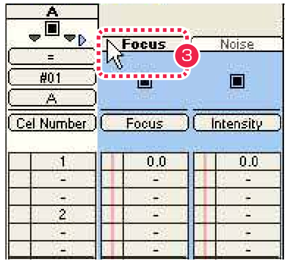
To change the layer order, it will be possible to use drag and drop to make the changes.



① Click the layer title bar of the effect layer that is to be moved.



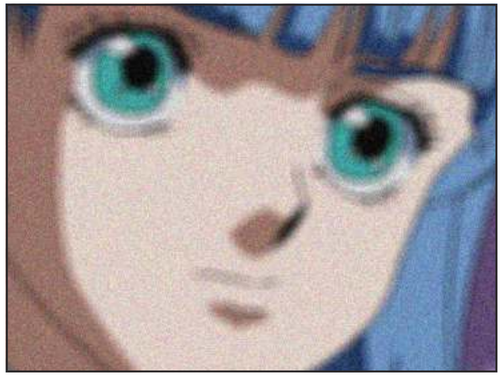
② By dragging the layer as it is in the left and right directions, the shape of the cursor will change, and a red marker will be shown to indicate the insertion point.



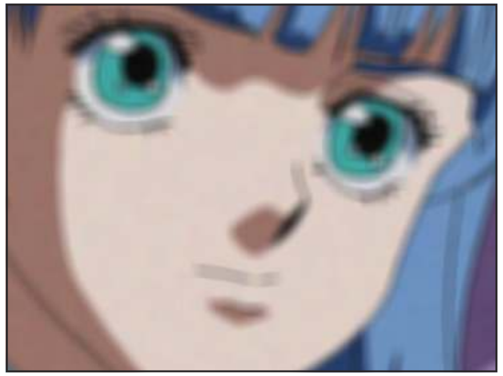
③ Release the mouse button when the marker is in the point where the effect layer is to be inserted. The effect layer will be moved to the position specified by the red marker.

2. Effect layers order and result

Depending on the order in which effects layers are used, the effect will be different.



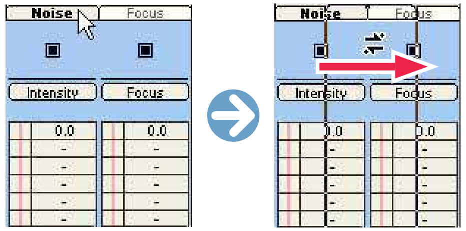
Ex.1: Applying Focus (Focus value = 5), then Noise (Intensity = 50)
Noise is applied after implementing the focus effect.



Ex.2: Applying Noise (Intensity = 50), then Focus (Focus value = 5)
Because the focus effect is applied after adding the noise, the noise effect will be weaker.

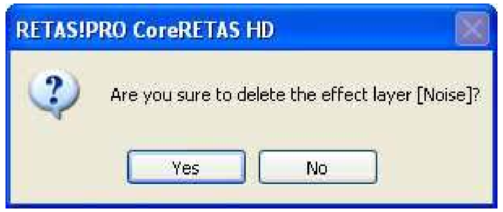
Copying an effects layer

By dragging and dropping an effects layer while pressing the [Alt/Opt] key, it will be possible to copy the effects layer.


Noise
Focus
Intensity
Focus
0.0
0.0

Deleting an effects layer

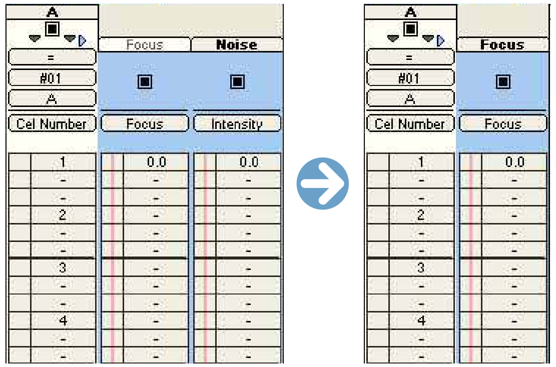
It will be possible to delete unnecessary effects layers.


RETAS!PRO CoreRETAS HD

Are you sure to delete the effect layer [Noise]?

Yes
No

① Dragging and dropping an effects layer outside the [X-sheet] window will show a confirmation dialog box. By clicking "Yes", the layer can be deleted.


A
#01
Cel Number
Focus
Noise
Intensity
0.0
1
2
3
4

② The unnecessary effects layer has been deleted.

POINT

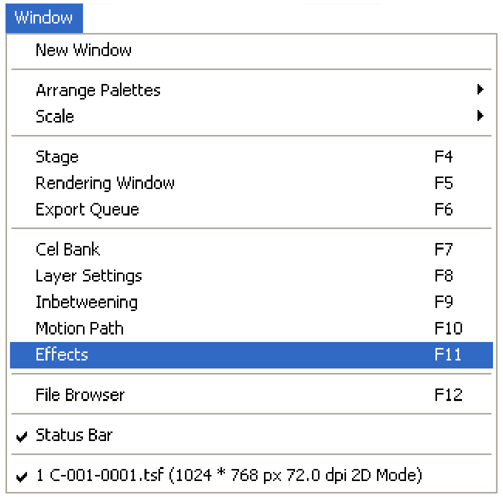
The deletion of an effects layer can also be carried out by menu selection.
Select the unnecessary effects layer in the X-sheet, and select [Delete] from the [Effects] menu. If [Delete All] is selected at this time, all of the effects layers added to the same layer will be deleted.

Combining effects to create new effects

[Effect Sets] are a function that allows a number of effects to be combined and used as a single effect.

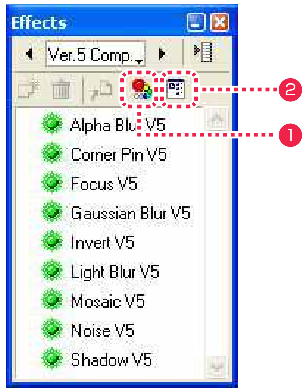
1. Showing the [Effects] palette

Select [Effects] from the [Window] menu to show the [Effects] palette.


Window
New Window
Arrange Palettes
Scale
Stage F4
Rendering Window F5
Export Queue F6
Cel Bank F7
Layer Settings F8
Inbetweening F9
Motion Path F10
Effects F11
File Browser F12
✓ Status Bar
✓ 1 C-001-0001.tsf (1024 * 768 px 72.0 dpi 2D Mode)

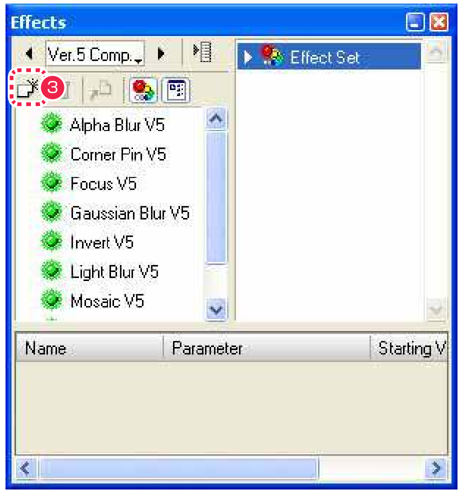
2. Setting an [Effect Set]

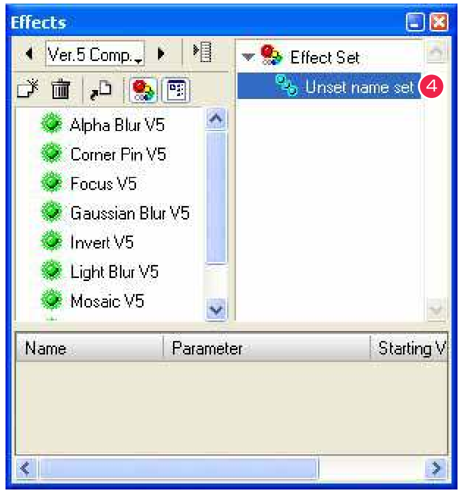
[Effect Set] setting is carried out in the [Effects] palette.

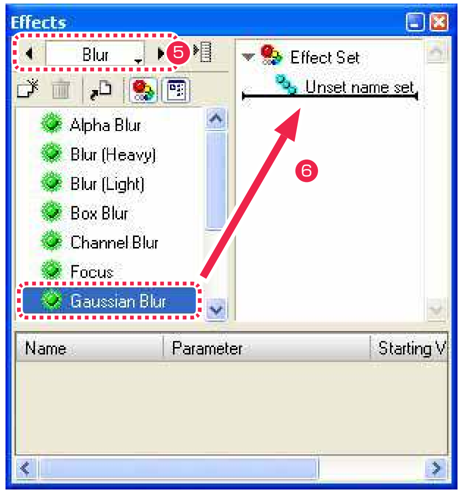

Effects
Ver.5 Comp.
Alpha Blur V5
Corner Pin V5
Focus V5
Gaussian Blur V5
Invert V5
Light Blur V5
Mosaic V5
Noise V5
Shadow V5
②
①

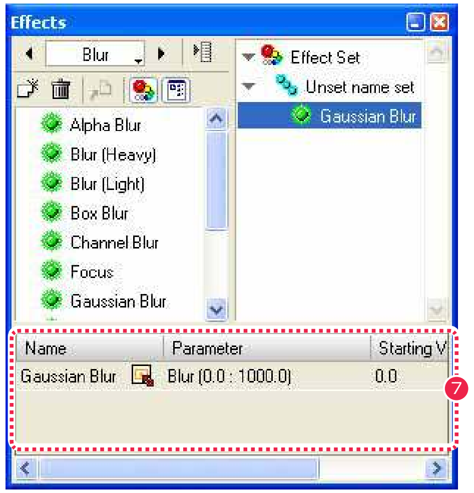
① Click the [Show/Hide Effect Set] button to show the effect set view.

② Click the [Show/Hide List View] button to show the list view.


Effects
Ver.5 Comp.
Effect Set
③
Alpha Blur V5
Corner Pin V5
Focus V5
Gaussian Blur V5
Invert V5
Light Blur V5
Mosaic V5
Name
Parameter
Starting V


Effects
Ver.5 Comp.
Effect Set
Unset name set
④
Alpha Blur V5
Corner Pin V5
Focus V5
Gaussian Blur V5
Invert V5
Light Blur V5
Mosaic V5
Name
Parameter
Starting V


Effects
Blur
⑤
Effect Set
Unset name set
⑥
Alpha Blur
Blur (Heavy)
Blur (Light)
Box Blur
Channel Blur
Focus
Gaussian Blur
Name
Parameter
Starting V


Effects
Blur
Effect Set
Unset name set
Gaussian Blur
Alpha Blur
Blur (Heavy)
Blur (Light)
Box Blur
Channel Blur
Focus
Gaussian Blur
⑦

Name	Parameter	Starting V
Gaussian Blur	Blur (0.0 : 1000.0)	0.0

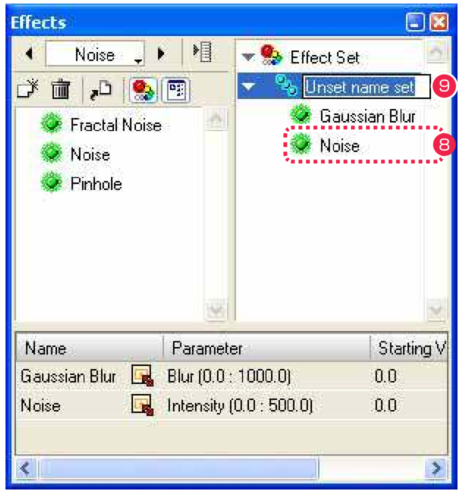
③ Click the [New Effect Set] button.

④ An [Effect Set] named [Unset Name Set] will be created.

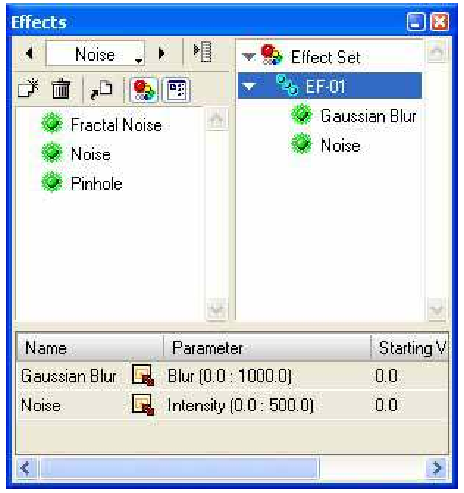
⑤ Using the [Select Effect Category] menu, it is possible to switch the effect category and select an effect.

⑥ By selecting a filter from the effects list and dragging and dropping it on an effect set, it can be loaded to the effect set.

⑦ Details of the filters loaded in the effect set will be shown in the list view.


Effects
Noise
Effect Set
Unset name set
⑨
Gaussian Blur
Noise
⑧
Fractal Noise
Noise
Pinhole

Name	Parameter	Starting V
Gaussian Blur	Blur (0.0 : 1000.0)	0.0
Noise	Intensity (0.0 : 500.0)	0.0


Effects
Noise
Effect Set
EF-01
Gaussian Blur
Noise
Fractal Noise
Noise
Pinhole

Name	Parameter	Starting V
Gaussian Blur	Blur (0.0 : 1000.0)	0.0
Noise	Intensity (0.0 : 500.0)	0.0

⑧ Continuing in the same way, it will be possible to select a different effect and load it to the effect set. Repeat for the required number of times to load the effects.

⑨ By clicking on the effect set name box, it will be possible to change the name.

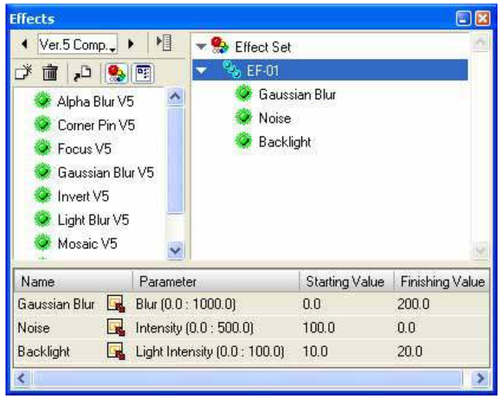
Changing the results of the effects

By adjusting the [Control] parameters on the X-sheet, it will be possible to control the degree that the various effects included in an [Effect Set] will influence the result.

- [Control]
  Specifies the proportion between 0 and 100 that each effect will influence the result.
- [Starting Value]
  Sets the parameter when [Control] = 0.
- [Finishing Value]
  Sets the parameter when [Control] = 100.

Example:

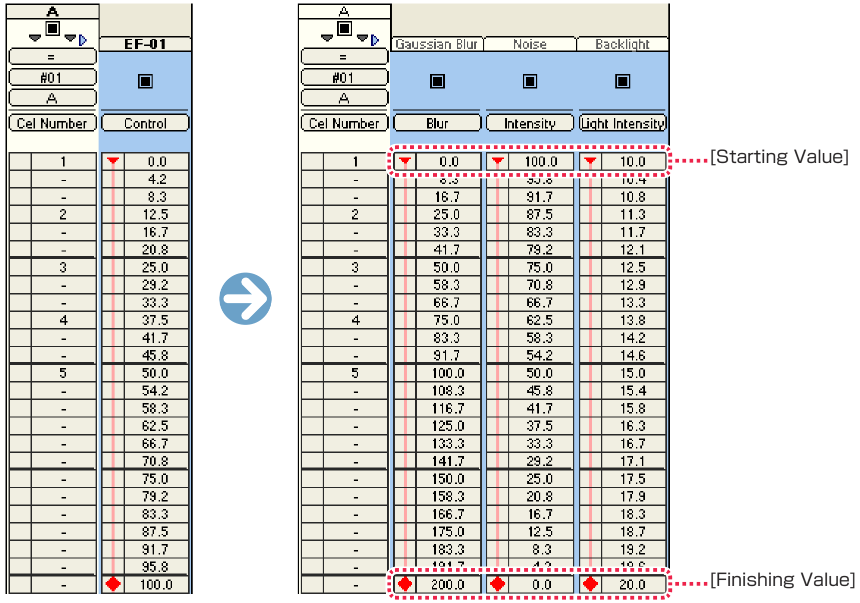
In the situation where the [Starting Value] and [Finishing Value] of each filter of the effect set has been set as in the figure at right, the [Control] values are used to apply each parameter as shown in the X-sheet below.



Name	Parameter	Starting Value	Finishing Value
Gaussian Blur	Blur (0.0 : 1000.0)	0.0	200.0
Noise	Intensity (0.0 : 500.0)	100.0	0.0
Backlight	Light Intensity (0.0 : 100.0)	10.0	20.0

The [EF-01] (Effect Set) in the left figure and the effects added to the [A] layer shown in the right figure will be equal.

[In the situation where the [Control] value increases from 0 to 100, the [Gaussian Blur] will become gradually stronger, while the [Noise] will gradually weaken and the [Backlight] will slightly intensify. The resulting effect will change through the link with the [Control] value.
In the case where the [Control] value reduces from 100 to 0, the effects will be applied in the reverse direction.



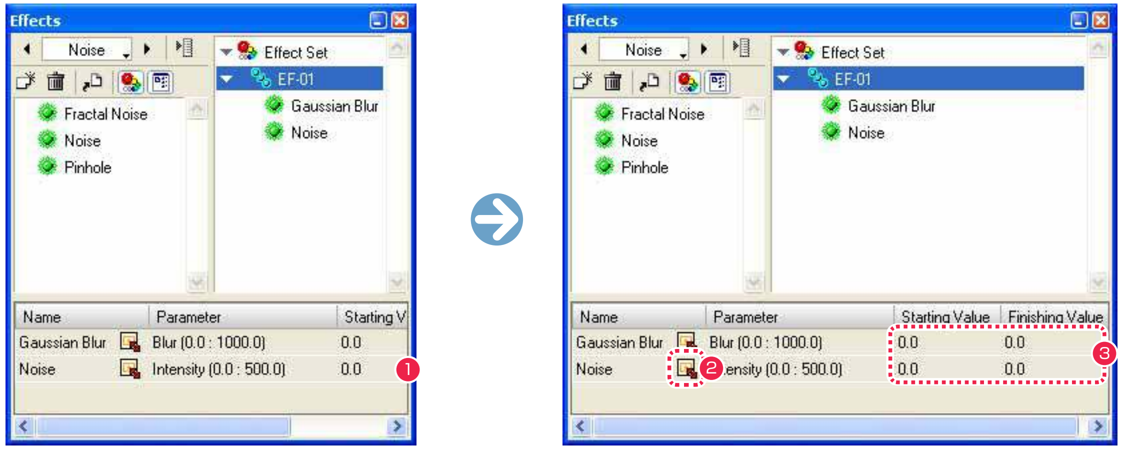
Cel Number	Control
1	0.0
-	4.2
-	8.3
2	12.5
-	16.7
-	20.8
3	25.0
-	29.2
-	33.3
4	37.5
-	41.7
-	45.8
5	50.0
-	54.2
-	58.3
-	62.5
-	66.7
-	70.8
-	75.0
-	79.2
-	83.3
-	87.5
-	91.7
-	95.8
-	100.0

	Gaussian Blur	Noise	Backlight
Cel Number	Blur	Intensity	Light Intensity
1	0.0	100.0	10.0
-	8.3	95.8	10.4
-	16.7	91.7	10.8
2	25.0	87.5	11.3
-	33.3	83.3	11.7
-	41.7	79.2	12.1
3	50.0	75.0	12.5
-	58.3	70.8	12.9
-	66.7	66.7	13.3
4	75.0	62.5	13.8
-	83.3	58.3	14.2
-	91.7	54.2	14.6
5	100.0	50.0	15.0
-	108.3	45.8	15.4
-	116.7	41.7	15.8
-	125.0	37.5	16.3
-	133.3	33.3	16.7
-	141.7	29.2	17.1
-	150.0	25.0	17.5
-	158.3	20.8	17.9
-	166.7	16.7	18.3
-	175.0	12.5	18.7
-	183.3	8.3	19.2
-	191.7	4.2	19.6
-	200.0	0.0	20.0

---

1. Setting the [Starting Values] and [Finishing Values]

The [Starting Values] and [Finishing Values] are input using the [Effects] palette.



Name	Parameter	Starting V
Gaussian Blur	Blur (0.0 : 1000.0)	0.0
Noise	Intensity (0.0 : 500.0)	0.0

Name	Parameter	Starting Value	Finishing Value
Gaussian Blur	Blur (0.0 : 1000.0)	0.0	0.0
Noise	ensity (0.0 : 500.0)	0.0	0.0

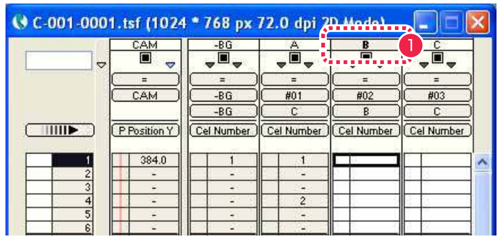
❶ Drag on the border of the [Effects] palette to widen the palette.

❷ Click on the [Effect Settings] button located after the effect name to show the settings dialog box of each effect and allow setting of the parameters that cannot be set in the X-sheet.

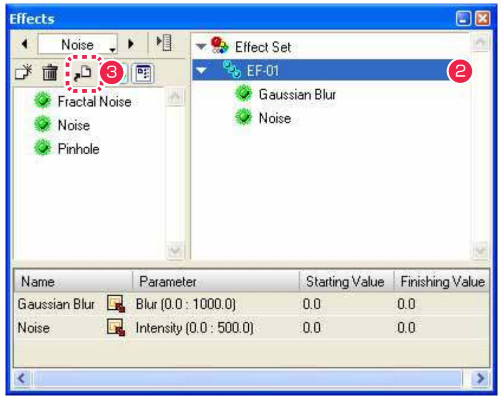
❸ The effect parameters (degree of the effect) should be set. Clicking on the [Starting Value] and [Finishing Value] fields will allow the parameters to be set. The maximum and minimum values that can be set are shown after each parameter.

2. Loading an [Effect Set] to a layer

This loads an [Effect Set] that was set in the [Effects] palette to a layer on the X-sheet.


C-001-0001.tsf (1024 * 768 px 72.0 dpi 2D Mode)
CAM
-BG
A
B
C
#01
#02
#03
P Position Y
Cel Number
384.0
①

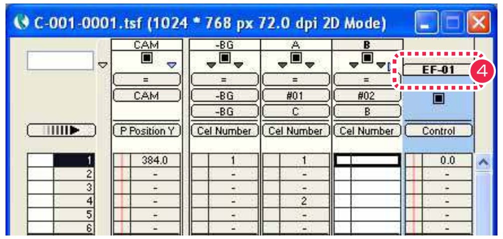
① Select the layer in the X-sheet that is to have the effect applied.


Effects
Noise
Fractal Noise
Noise
Pinhole
Effect Set
EF-01
Gaussian Blur
Noise
②
③

Name	Parameter	Starting Value	Finishing Value
Gaussian Blur	Blur (0.0 : 1000.0)	0.0	0.0
Noise	Intensity (0.0 : 500.0)	0.0	0.0

② Select the [Effect Set] (Ex.: EF-01) in the [Effects] palette.

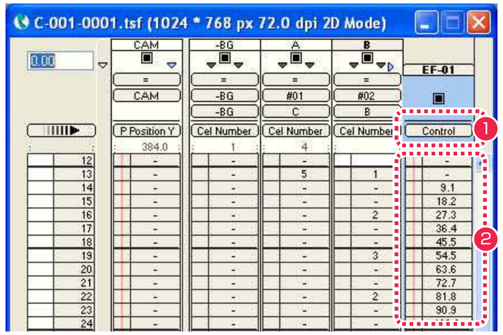
③ Click the [Load Effect to Sheet] button.


C-001-0001.tsf (1024 * 768 px 72.0 dpi 2D Mode)
CAM
-BG
A
B
EF-01
Control
P Position Y
Cel Number
384.0
0.0
④

④ The [Effect Set] is loaded to the layer selected in the X-sheet.

3. Setting the [Control]

This inputs the [Control] in the X-sheet.


C-001-0001.tsf (1024 * 768 px 72.0 dpi 2D Mode)
CAM
-BG
A
B
EF-01
Control
P Position Y
Cel Number
384.0
9.1
18.2
27.3
36.4
45.5
54.5
63.6
72.7
81.8
90.9
①
②

① Set the effect set on the X-sheet to [Control] mode.

② The [Control] column will be set between the range of 0 and 100. Operate the parameters of each effect using the following conditions. The intervening values will be calculated through inbetweening on the X-sheet.

- When the [Control] value is set to 0:
  This will become the [Starting Point] for the parameters of each filter included in the [Effect Set].
- When the [Control] value is set to 100:
  This will become the [Finishing Point] for the parameters of each filter included in the [Effect Set].
- When the [Control] value is set to 50:
  This will become the midpoint between the [Starting Point] and [Finishing Point] for the parameters of each filter included in the [Effect Set].

* For more details of inbetweening settings in the X-sheet, see [Chapter 4 Application Description: Shooting].

POINT

For adding effects, it is also possible to select the [Effect Set] and drag and drop it on the X-sheet.

Step: 02

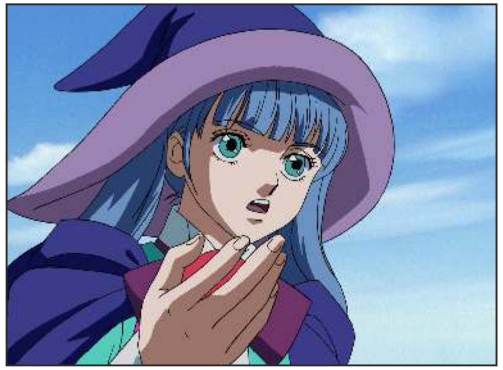
List of effects

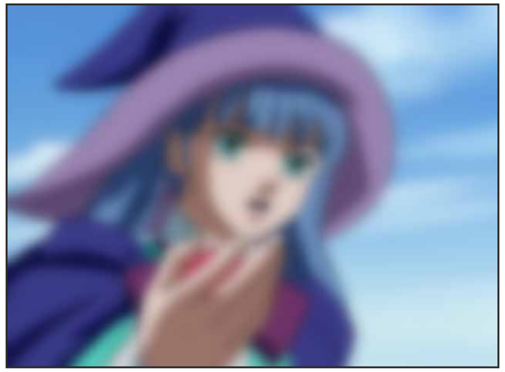
In this step, a listing and explanation are given of the filters included as standard with CoreRETAS HD.

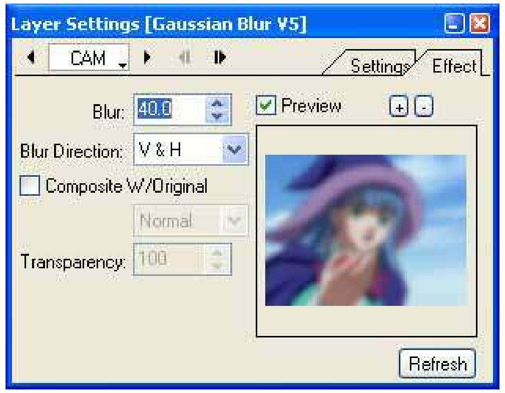
Ver.5 compatible

Gaussian blur V5

Adds a Gaussian blur effect. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.






Layer Settings [Gaussian Blur V5]
CAM
Settings
Effect
Refresh

Blur: 40.0

Blur Direction: V & H

☐ Composite W/Original

Normal

Transparency: 100

☑ Preview

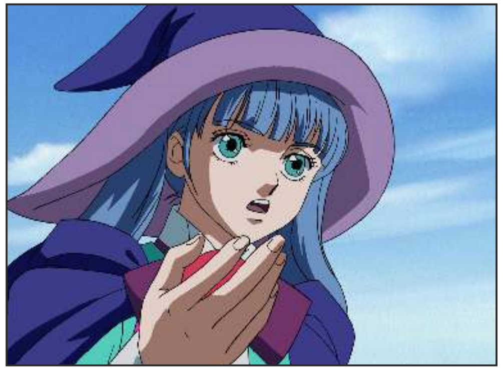
- [Blur]
  Sets the amount of blur for the layer image.
- [Blur Direction]
  Sets the direction in which the blur is applied.
  [V&H (Vertical and Horizontal Directions)], [H Only(Horizontal Direction Only)], [V Only(Vertical Direction Only)]
- [Composite W/Original]
  Composites the result of the blur with the original image. Allows setting of the compositing mode for the compositing.

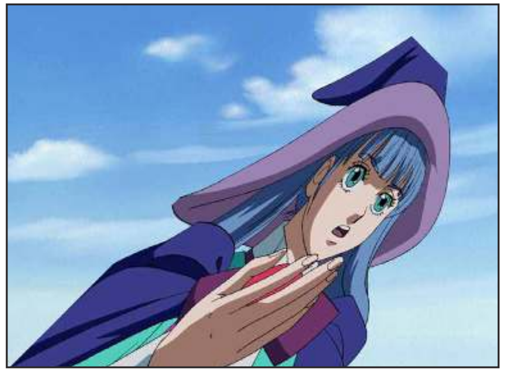
Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

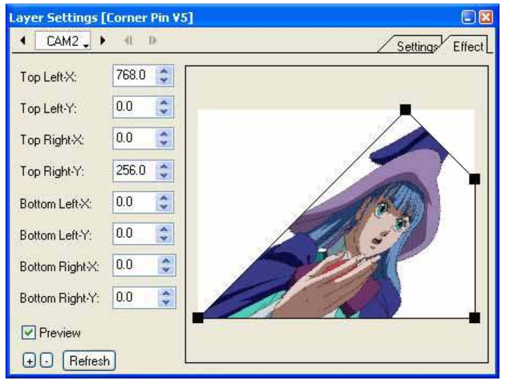
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Corner pin V5

Sets [Cornerpin Distortion]. Clicking the [Preview] check box in the [Layer Settings] palette will set it to the "On" condition. It will then be possible to drag and move the handles (the apexes of the four corners of the image) displayed in the preview to apply corner pin distortion to the image. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







Top Left-X: 768.0

Top Left-Y: 0.0

Top Right-X: 0.0

Top Right-Y: 256.0

Bottom Left-X: 0.0

Bottom Left-Y: 0.0

Bottom Right-X: 0.0

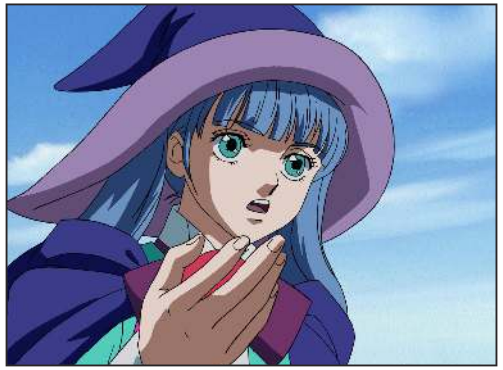
Bottom Right-Y: 0.0

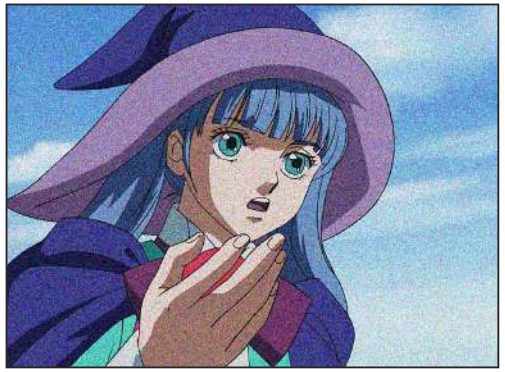
☑ Preview

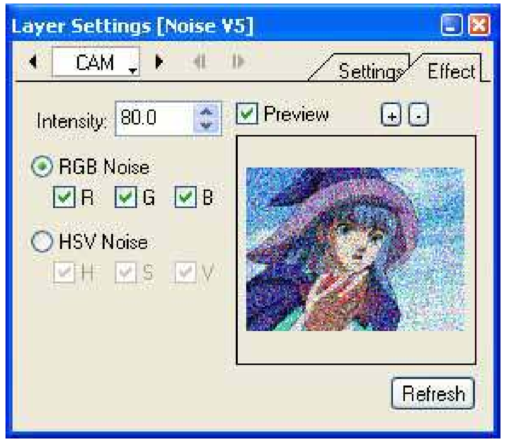
- [Top Left X]
  Sets the X coordinate of the top left handle.
- [Top Left Y]
  Sets the Y coordinate of the top left handle.
- [Top Right X]
  Sets the X coordinate of the top right handle.
- [Top Right Y]
  Sets the Y coordinate of the top right handle.
- [Bottom Left X]
  Sets the X coordinate of the bottom left handle.
- [Bottom Left Y]
  Sets the Y coordinate of the bottom left handle.
- [Bottom Right X]
  Sets the X coordinate of the bottom right handle.
- [Bottom Right Y]
  Sets the Y coordinate of the bottom right handle.

Noise V5

Sets the noise effect. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







Layer Settings [Noise V5]

Intensity: 80.0

☑ Preview

● RGB Noise

☑ R ☑ G ☑ B

○ HSV Noise

☑ H ☑ S ☑ V

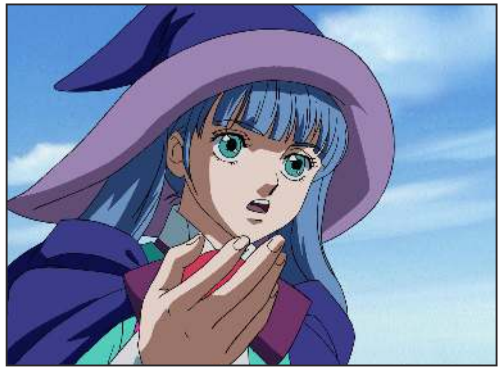
- [Intensity]
  Sets the intensity of the noise.

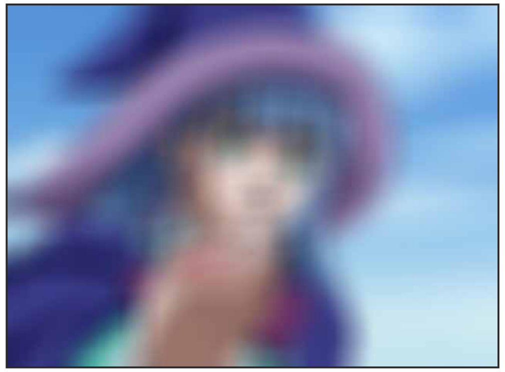
- [RGB Noise]
  Allows noise to be individually applied to each of the R (Red), G (Green) and B (Blue) channels of the image.

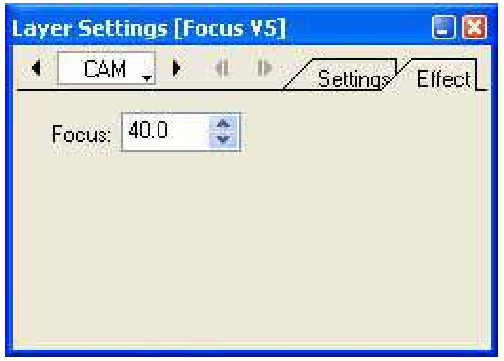
- [HSV Noise]
  Allows noise to be individually applied to each of the H (Hue), S (Saturation) and V (Value) channels of the image.

Focus V5

Applies an out-of-focus effect. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







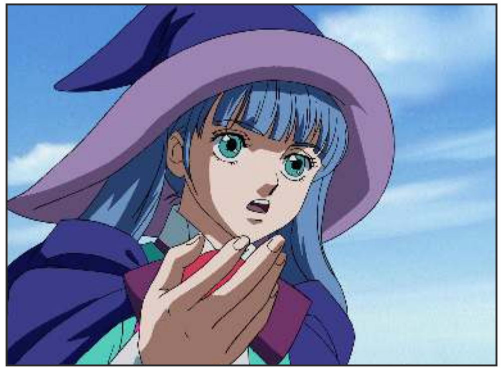
Layer Settings [Focus V5]

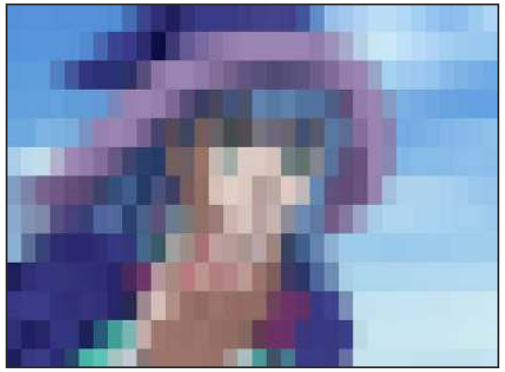
Focus: 40.0

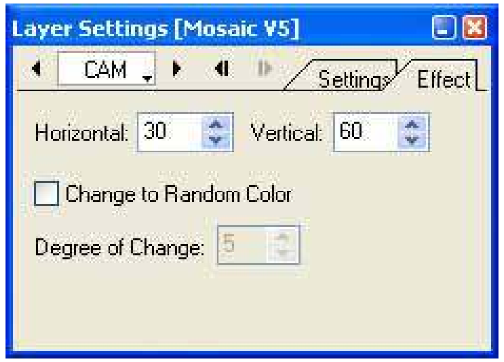
- [Focus]
  Sets the out-of-focus value.

Mosaic V5

Applies a mosaic effect. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







Layer Settings [Mosaic V5]

Horizontal: 30 Vertical: 60

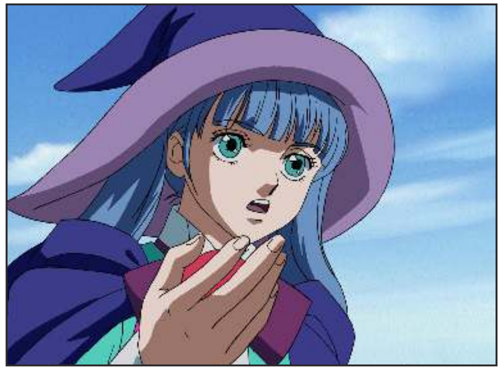
☐ Change to Random Color

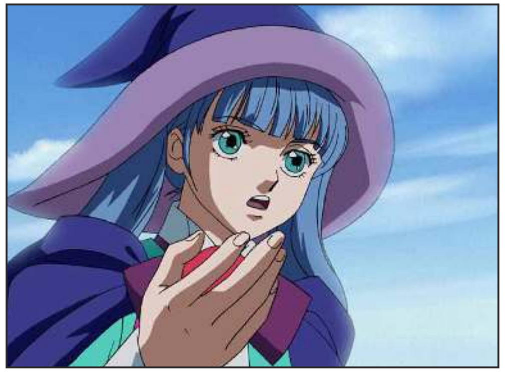
Degree of Change: 5

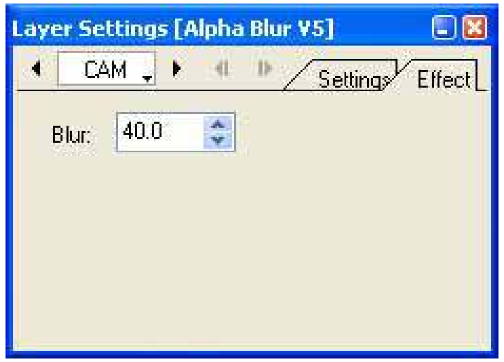
- [Horizontal]
  Sets the fineness of the mosaic in the horizontal direction. (Units: pixels)
- [Vertical]
  Sets the fineness of the mosaic in the vertical direction. (Units: pixels)
- [Change to Random Color]
  Sets whether or not the pixel color should be randomly changed.
- [Degree of Change]
  When [Change to Random Color] is being implemented, sets the amount by which the color is changed.

Alpha blur V5

Applies a blur effect to the alpha channel of the layer image. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







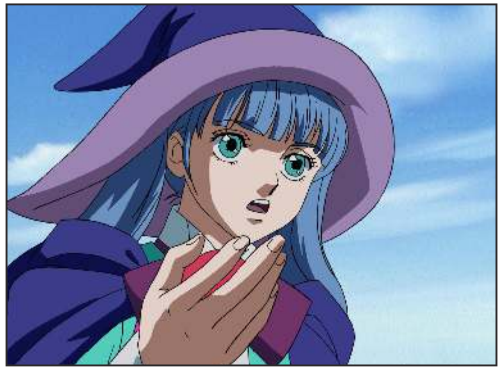
Layer Settings [Alpha Blur V5]

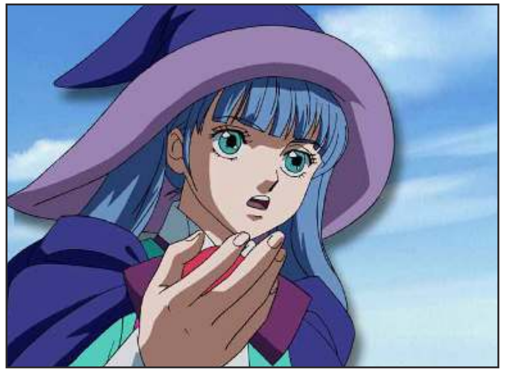
Blur: 40.0

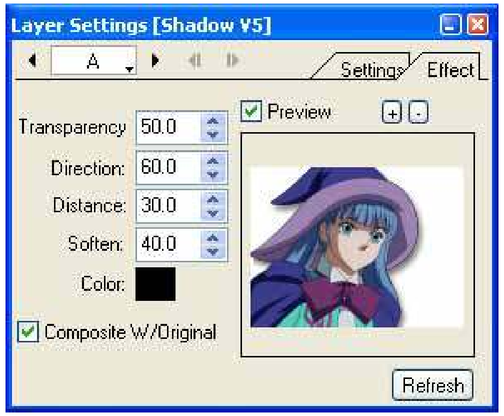
- [Blur]
  Sets the amount of alpha channel blur.

Shadow V5

Applies a drop shadow effect to the background layer. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.







Transparency 50.0

Direction: 60.0

Distance: 30.0

Soften: 40.0

Color:

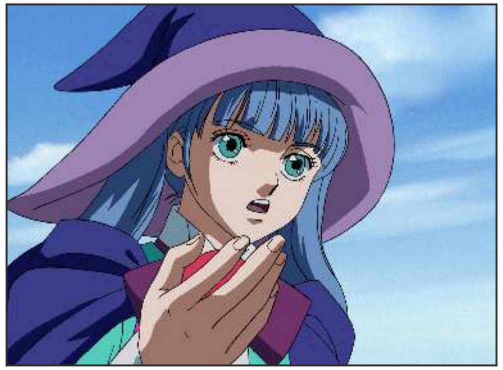
☑ Preview

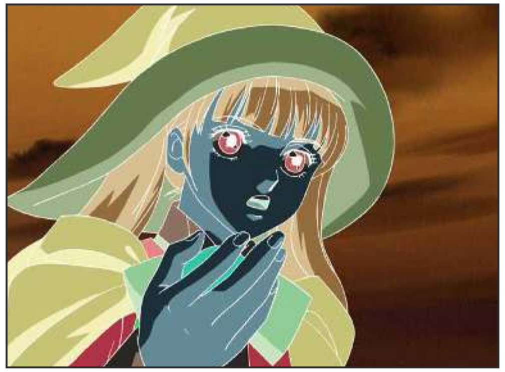
☑ Composite W/Original

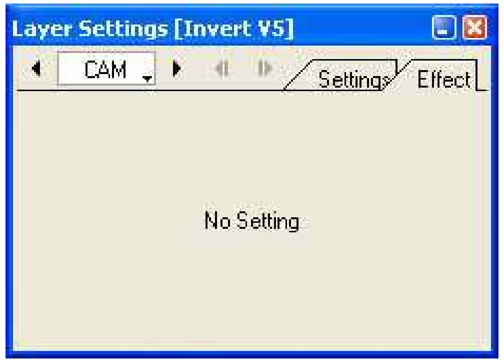
- [Transparency]
  Sets the shadow transparency.
- [Direction]
  Sets the shadow direction.
- [Distance]
  Sets the distance that the shadow will be separated from the image.
- [Soften]
  Sets the amount of blur that will be set to the shadow edge part.
- [Color]
  Sets the shadow color.
- [Composite W/Original]
  Sets whether the shadow will be composited with the original image. When this is set to "Off",only the shadow will be generated.

Invert V5

Applies an effect that inverts the image in a negative/positive inversion. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.



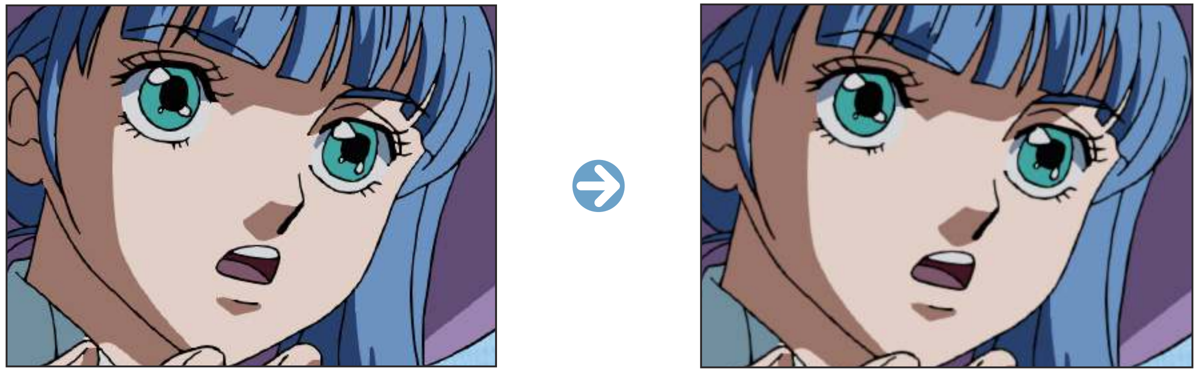


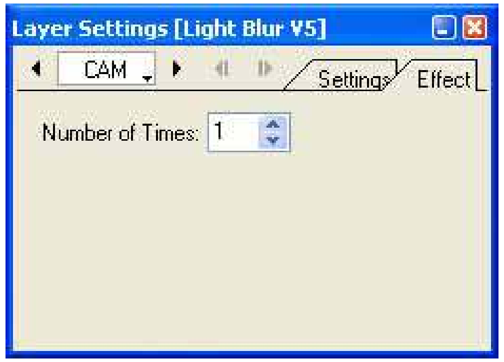


No Setting

Light blur V5

Repeatedly applies a surrounding one-pixel blur for the number of times set. This filter is provided to maintain lower compatibility with CoreRETAS Ver.5.





Layer Settings [Light Blur V5]

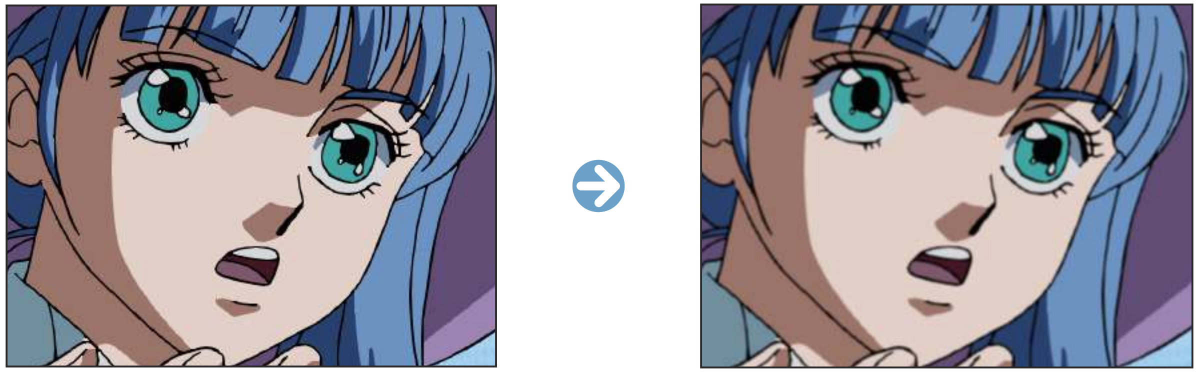
Number of Times: 1

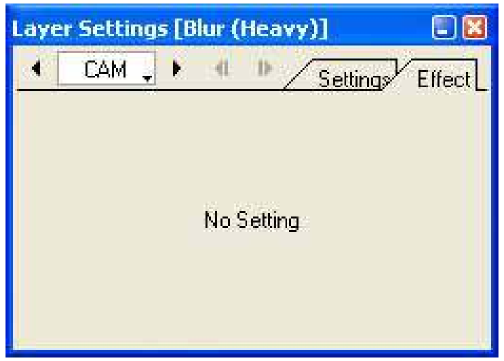
- [Number of Times]
  Sets the number of times that the blur is applied.

Blur

Blur (heavy)

Strongly applies a surrounding one-pixel blur.



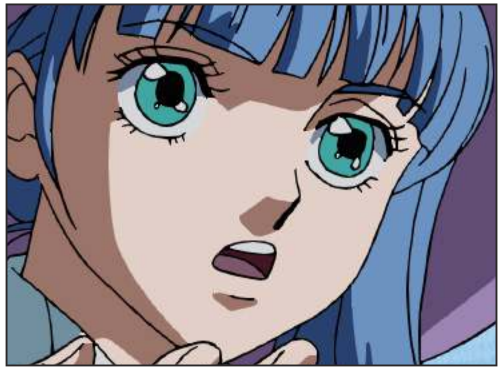


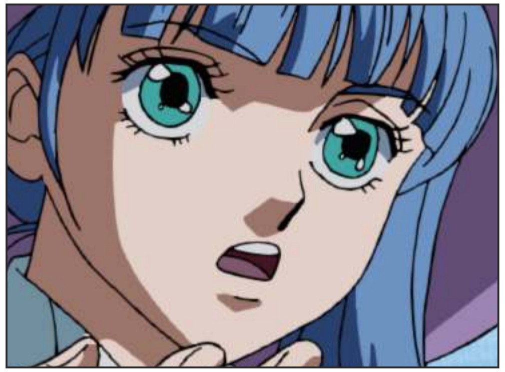
Layer Settings [Blur (Heavy)]

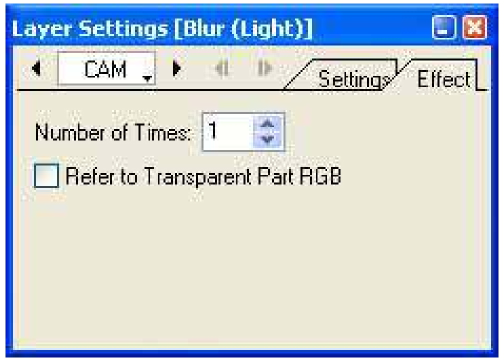
No Setting

Blur (light)

Repeatedly applies a surrounding one-pixel blur for the number of times set.







Layer Settings [Blur (Light)]

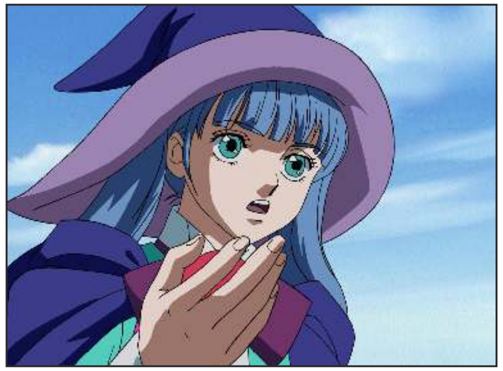
Number of Times: 1

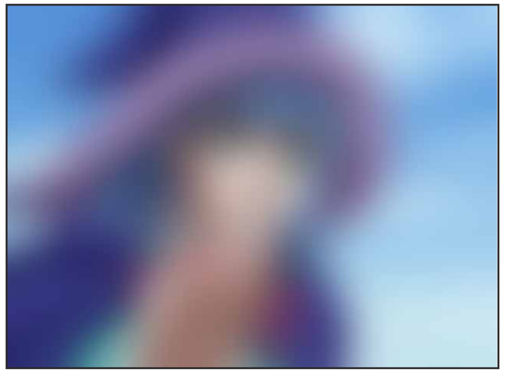
☐ Refer to Transparent Part RGB

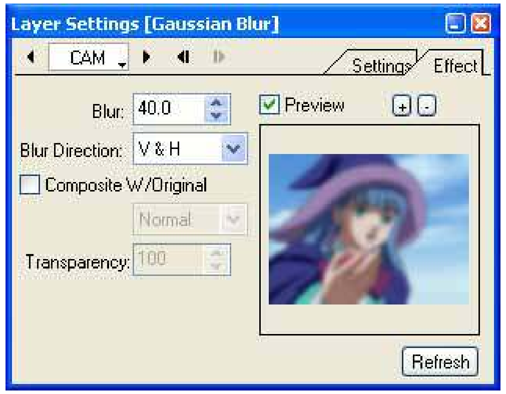
- [Number of Times]
  Sets the number of times that the blur is applied.
- [Refer to Transparent Part RGB]
  Apply blur referring to the RGB of the transparent part.

Gaussian blur

Applies a Gaussian blur effect.







Layer Settings [Gaussian Blur]

Blur: 40.0

☑ Preview

Blur Direction: V & H

☐ Composite W/Original

Normal

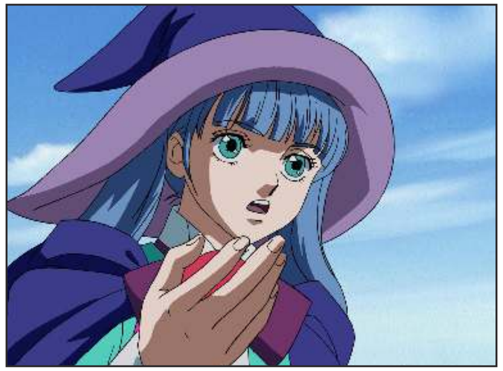
Transparency: 100

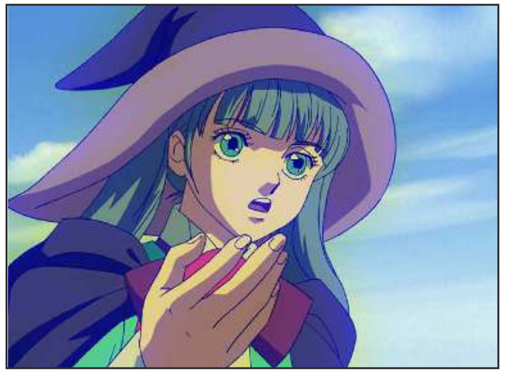
- [Blur]
  Sets the amount of blur.
- [Blur Direction]
  Sets the direction in which the blur is applied.
  [V&H (Vertical and Horizontal Directions)], [H Only(Horizontal Direction Only)], [V Only(Vertical Direction Only)]
- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

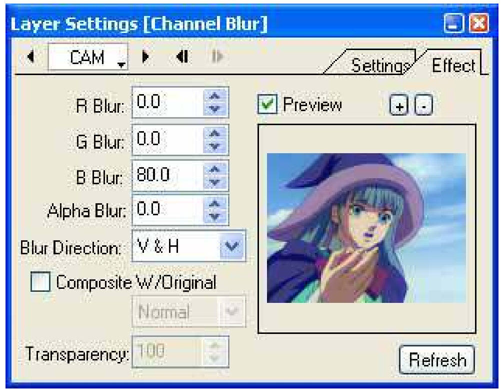
  Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Channel blur

Applies the effect of Gaussian blur to each of the RGB channels.







R Blur: 0.0
G Blur: 0.0
B Blur: 80.0
Alpha Blur: 0.0
Blur Direction: V & H
☐ Composite W/Original
Normal
Transparency: 100
☑ Preview

- [R Blur]
  Sets the amount of blur for the R (Red) channel.

- [G Blur]
  Sets the amount of blur for the G (Green) channel.

- [B Blur]
  Sets the amount of blur for the B (Blue) channel.

- [Alpha Blur]
  Sets the amount of blur for the alpha channel.

- [Blur Direction]
  Sets the direction in which the blur is applied.
  [V&H (Vertical and Horizontal Directions)], [H Only(Horizontal Direction Only)], [V Only(Vertical Direction Only)]

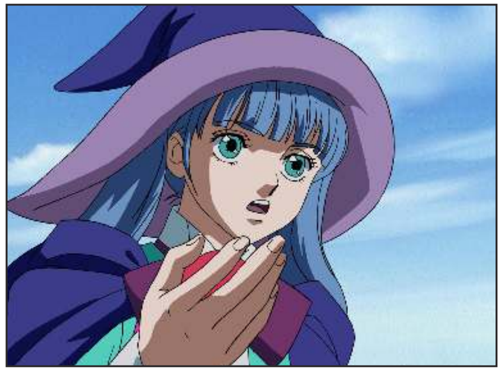
- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

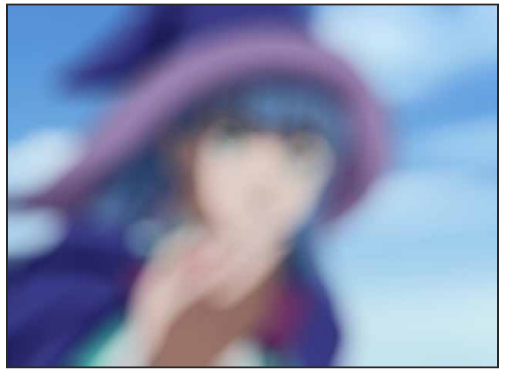
  Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

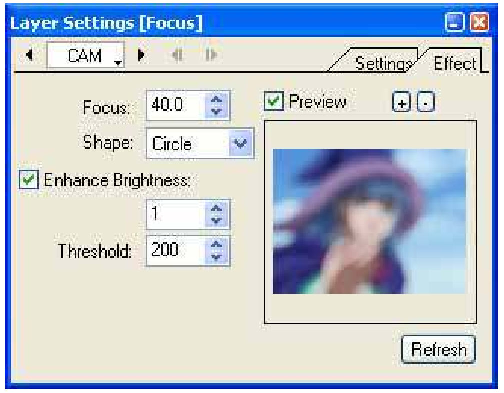
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Focus

Applies an out-of-focus effect.







Focus: 40.0
Shape: Circle
☑ Enhance Brightness: 1
Threshold: 200
☑ Preview

- [Focus]
  Sets the out-of-focus value.

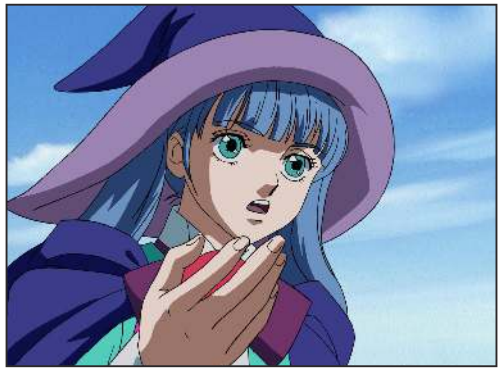
- [Shape]
  Sets the shape of the blur when applying blur to the image.
  [Square] [Hexagon] [Circle]

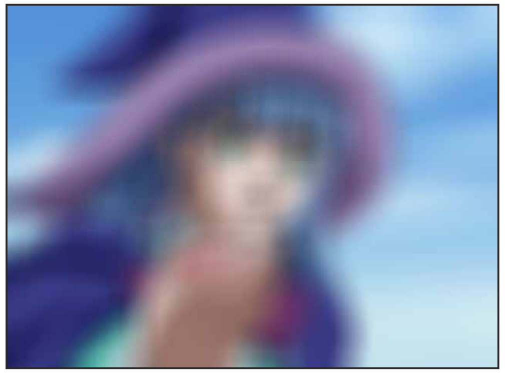
- [Enhance Brightness]
  Allows setting of the degree of brightness enhancement. When this value is large, the highlight parts will be enhanced more than their surroundings.

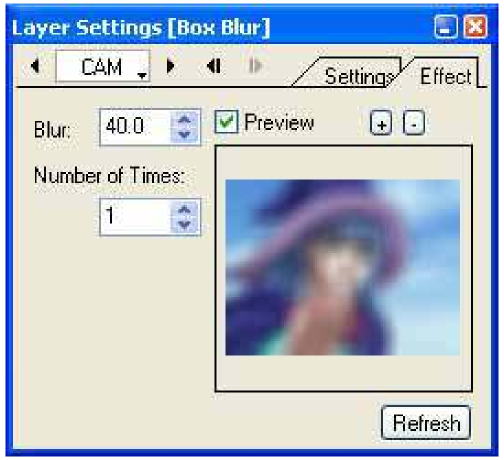
- [Threshold]
  Sets the threshold used to determine the parts that are considered as highlights during [Enhance Brightness].

Box blur

Repeatedly applies a blur in which colors in a square shape surrounding a pixel are averaged.







Layer Settings [Box Blur]

Blur: 40.0

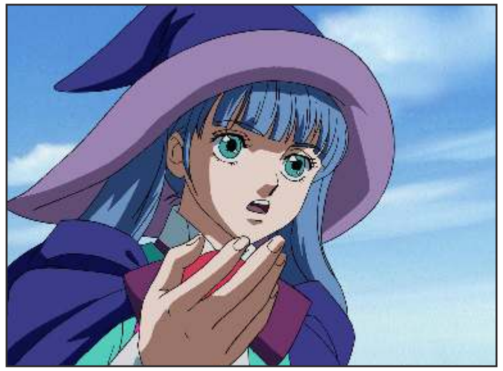
☑ Preview

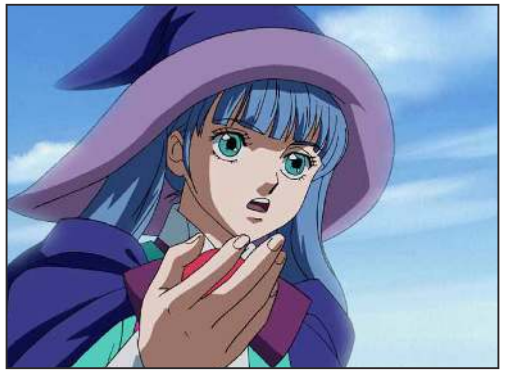
Number of Times: 1

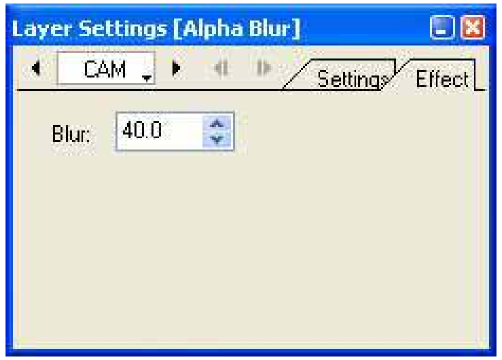
- [Blur]
  Sets the amount of blur.
- [Number of Times]
  Sets the number of times that the blur is applied.

Alpha blur

Applies a blur effect to the alpha channel of the layer image.







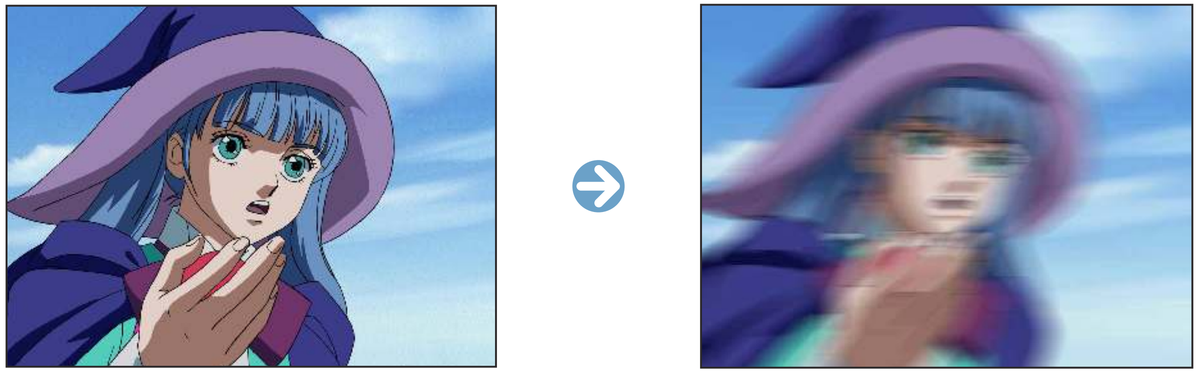
Layer Settings [Alpha Blur]

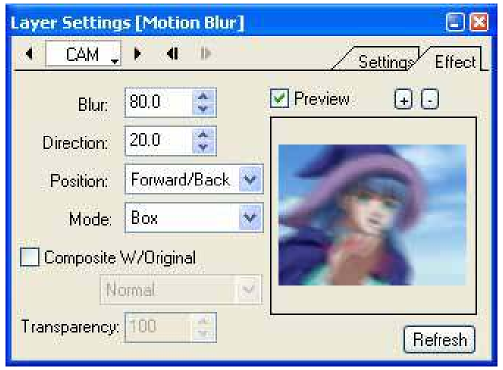
Blur: 40.0

- [Blur]
  Sets the amount of blur.

Motion blur

Applies a motion blur effect in a specified direction.




Layer Settings [Motion Blur]

Blur: 80.0
Direction: 20.0
Position: Forward/Back
Mode: Box
☐ Composite W/Original
Normal
Transparency: 100
☑ Preview

- [Blur]
  Sets the amount of blur.

- [Direction]
  Sets the direction in which the blur is applied.

- [Position]
  Applies the blur in each pixel selected position as seen from the center point.
  [Forward/Backward], [Backward], [Forward]

- [Mode]
  Sets the blur shape when applying the blur to the image.
  [Box], [Soft]

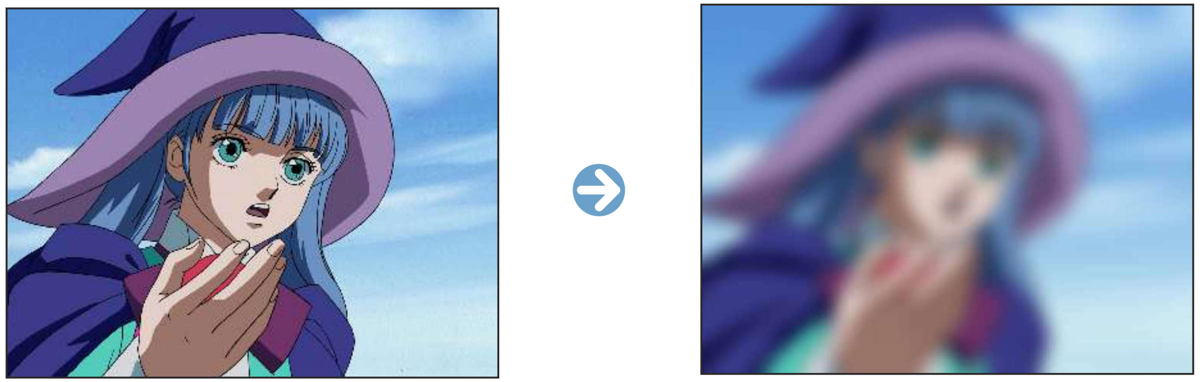
- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

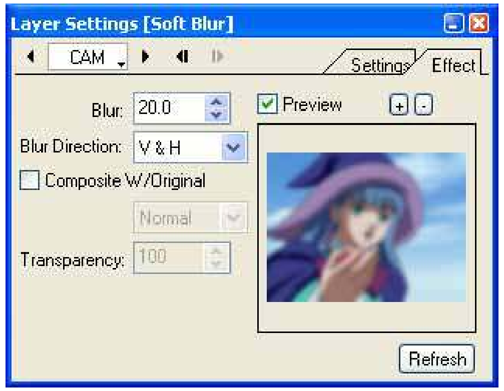
Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen], [Composite W/BG]

- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Soft blur

This implements a blurring effect that has softer edges than Gaussian blur, at a faster speed than Gaussian blur.




Layer Settings [Soft Blur]

Blur: 20.0
Blur Direction: V & H
☐ Composite W/Original
Normal
Transparency: 100
☑ Preview

- [Blur]
  Sets the amount of blur.

- [Blur Direction]
  Sets the direction in which the blur is applied.
  [Vertical and Horizontal Directions], [Horizontal Direction Only], [Vertical Direction Only]

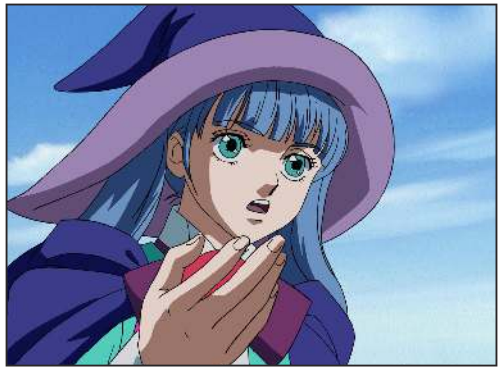
- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

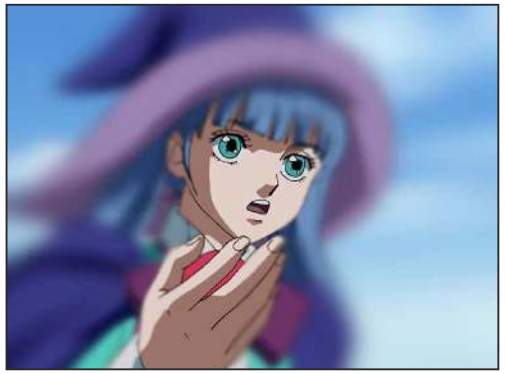
Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

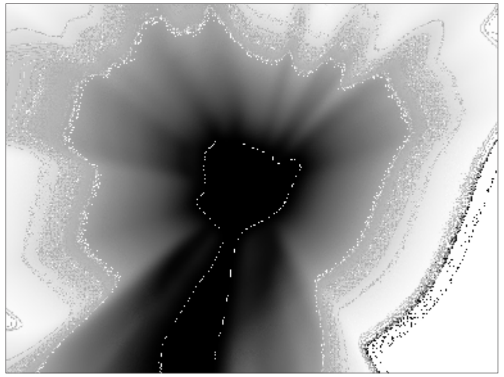
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Partial blur

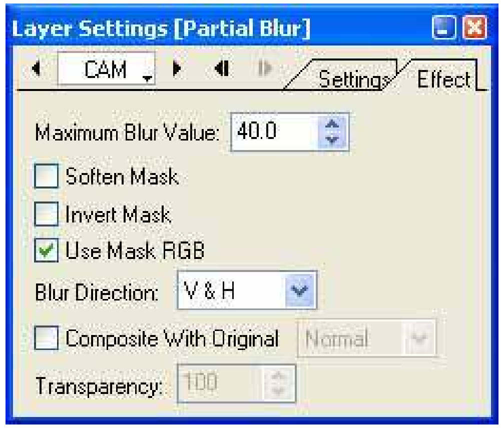
Applies Gaussian blur effect that corresponds to the brightness of the mask image loaded in the layer.







[Partial Blur] mask image



Maximum Blur Value: 40.0

☐ Soften Mask

☐ Invert Mask

☑ Use Mask RGB

Blur Direction: V & H

☐ Composite With Original Normal

Transparency: 100

- [Maximum Blur Value]
  Sets the maximum value of the blur.

- [Soften Mask]
  Softens the layer mask.

- [Invert Mask]
  Inverses the layer mask.

- [Use Mask RGB]
  When this is set to "On", the mask RGB is used. When it is set to "Off", the alpha channel is used.

- [Blur Direction]
  Sets the direction in which the blur is applied.
  [V&H (Vertical and Horizontal Directions)], [H Only(Horizontal Direction Only)], [V Only(Vertical Direction Only)]

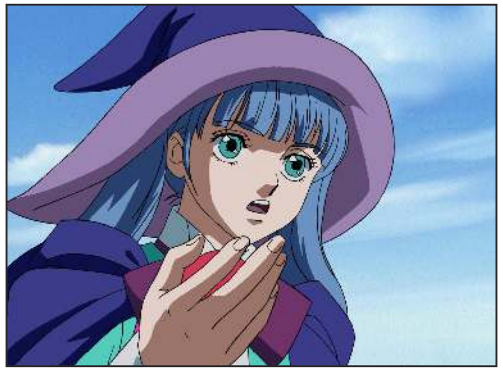
- [Composite With Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

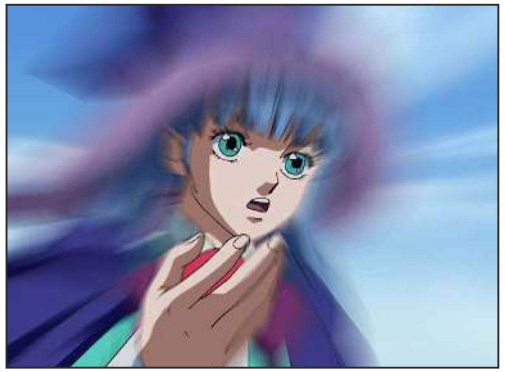
  Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

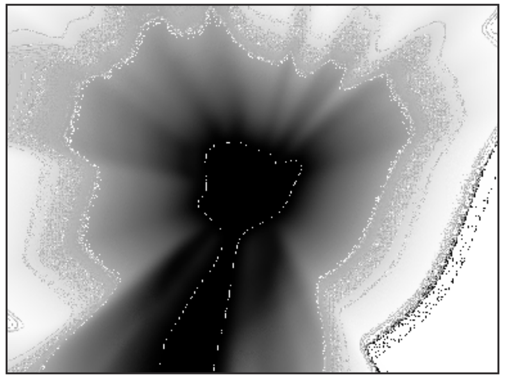
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Partial radial blur

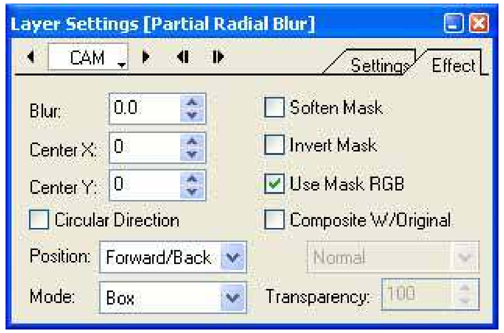
Applies a radial or circumferential blur effect that corresponds to the brightness of the mask image loaded in the layer.







[Partial Radial Blur] mask image



Blur: 0.0

Center X: 0

Center Y: 0

☐ Circular Direction

Position: Forward/Back

Mode: Box

☐ Soften Mask

☐ Invert Mask

☑ Use Mask RGB

☐ Composite W/Original

Normal

Transparency: 100

- [Blur]
  Sets the amount of blur.

- [Center X]
  Sets the radial center X coordinate.

- [Center Y]
  Sets the radial center Y coordinate.

- [Circular Direction]
  Setting this to "On" will apply the blur in the circumferential direction.Setting this to "Off" will apply the blur radially from the center point.

- [Position]
  Applies the blur to each pixel selected position as seen from the center point.
  [Forward/Backward], [Backward], [Forward]

- [Mode]
  Sets the blur shape when applying blur to the image.
  [Box], [Soft]

- [Soften Mask]
  Softens the layer mask.

- [Invert Mask]
  Inverses the layer mask.

- [Use Mask RGB]
  When this is set to "On", the mask RGB is used. When it is set to "Off", the alpha channel is used.

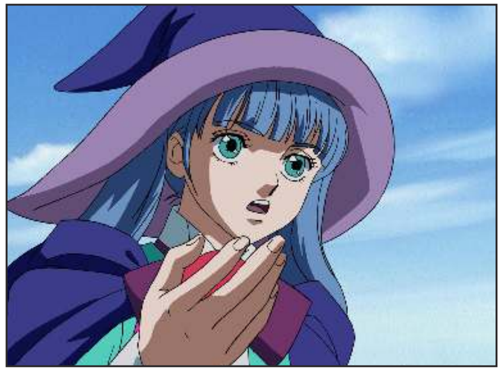
- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

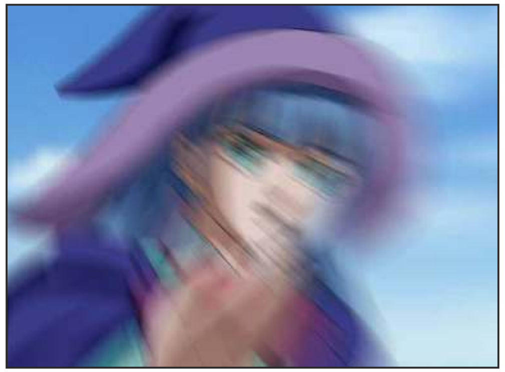
Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen], [Composite W/BG]

- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

Radial blur

Applies a radial or circumferential blur effect.





- [Blur]
  Sets the amount of blur.

- [Center X]
  Sets the radial center X coordinate.

- [Center Y]
  Sets the radial center Y coordinate.

- [Bias]
  Rather than applying the blur equally in all directions, it is possible to concentrate the blur in specified directions. Applying a larger figure will make the bias greater. The direction of the bias is specified in the [Direction] parameter.

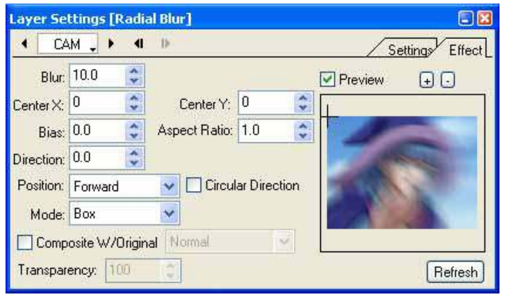
- [Aspect Ratio]
  Sets the aspect ratio of the blur.

- [Direction]
  When using [Bias], sets the direction in which the blur effect is to be concentrated as a particular direction. From 0° at left, the angle should be input as a clockwise direction.

- [Position]
  Applies the blur to each pixel selected position as seen from the center point.
  [Forward/Backward], [Backward], [Forward]

- [Circular Direction]
  Setting this to "On" will apply the blur in the circumferential direction.Setting this to "Off" will apply the blur radially from the center point.

- [Mode]
  Allows selection of [Box] or [Soft] as the blur mode.



Blur: 10.0
Center X: 0
Center Y: 0
Bias: 0.0
Aspect Ratio: 1.0
Direction: 0.0
Position: Forward
☐ Circular Direction
Mode: Box
☐ Composite W/Original Normal
Transparency: 100
☑ Preview

- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

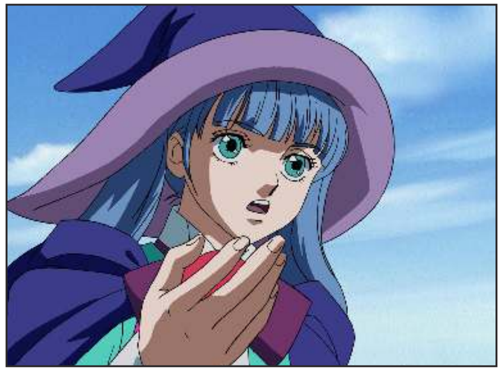
Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen], [Composite W/BG]

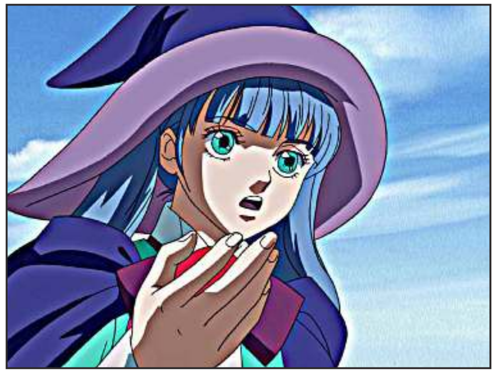
- [Transparency]
  Sets the transparency when compositing the result of the blur with the original image.

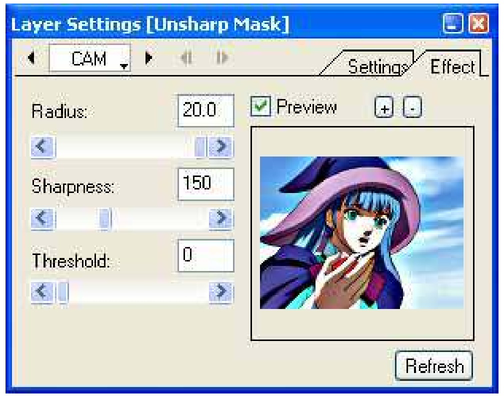
Sharp

Unsharp mask

Applies the unsharp mask effect (processing using Gaussian blur that enhances parts which show radical changes, such as edges).







Layer Settings [Unsharp Mask]

Radius: 20.0

Sharpness: 150

Threshold: 0

☑ Preview

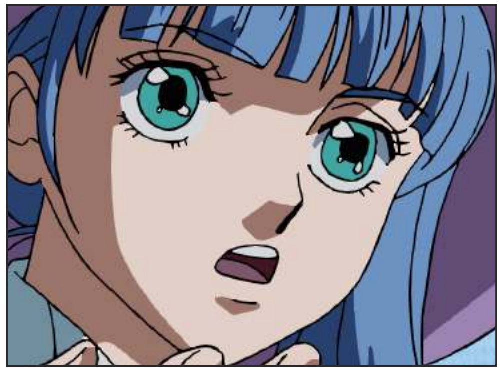
- [Radius]
  Sets the radius of highlights that are to have unsharp processing applied. When the radius value is larger, the radius of the highlights that will enter the boundary line will become larger, and the sharpness effect will be strengthened.

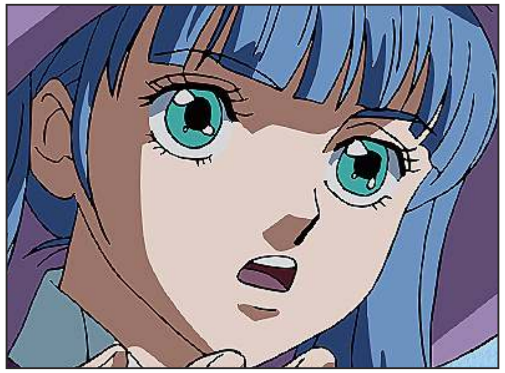
- [Sharpness]
  Adjusts the strength of the highlights that will have their sharpness effect enhanced. When the value is large, the highlights inside the boundary line will become whiter, and the dark parts will become darker to allow boundary lines to be clearly seen.

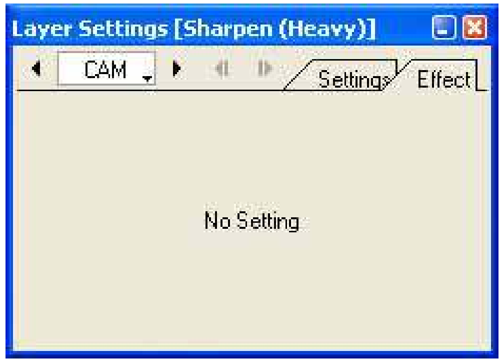
- [Threshold]
  Sets the degree of difference between lightness and darkness that will be considered as edges to adjust the edge (parts) that will be sharpened.

Sharpen (heavy)

Enhances edges and sharpens the image. [Sharp (Heavy)] strongly sharpens the surrounding 1 pixels.





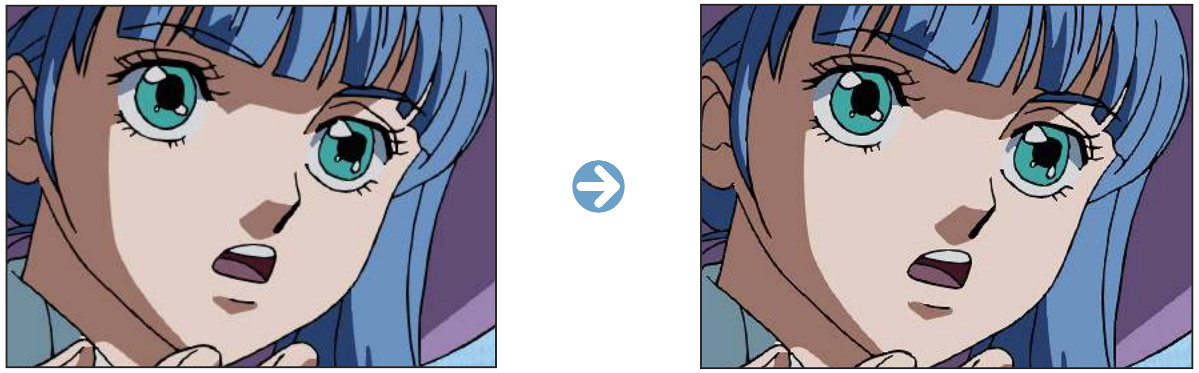


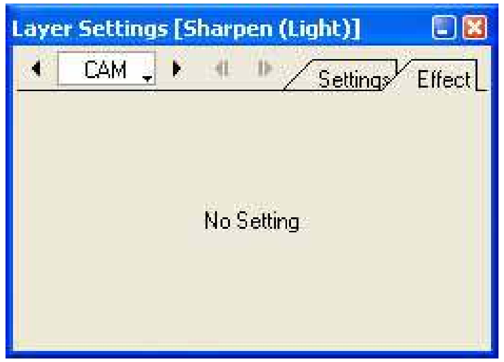
Layer Settings [Sharpen (Heavy)]

No Setting

Sharpen (light)

Enhances edges and sharpens the image. [Sharp (Light)] weakly sharpens the surrounding 1 pixels.



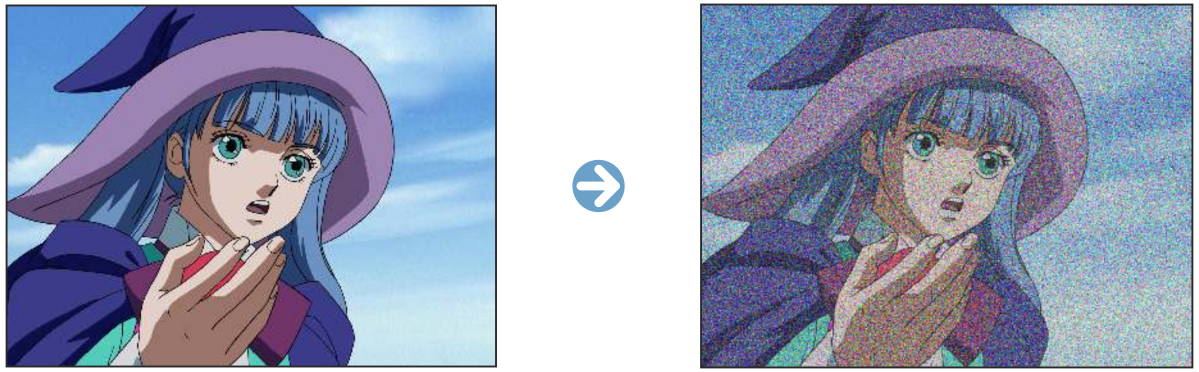


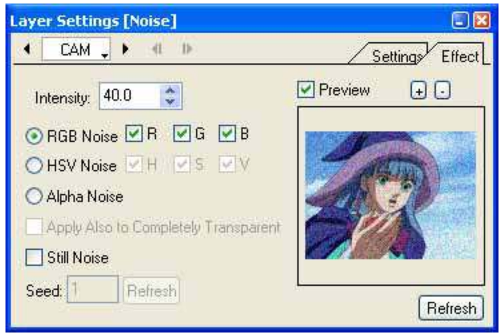
No Setting

Noise

Noise

Applies random noise to the RGB, HSV and alpha of each pixel of the layer's image.





Intensity: 40.0

● RGB Noise ☑ R ☑ G ☑ B

○ HSV Noise ☑ H ☑ S ☑ V

○ Alpha Noise

☐ Apply Also to Completely Transparent

☐ Still Noise

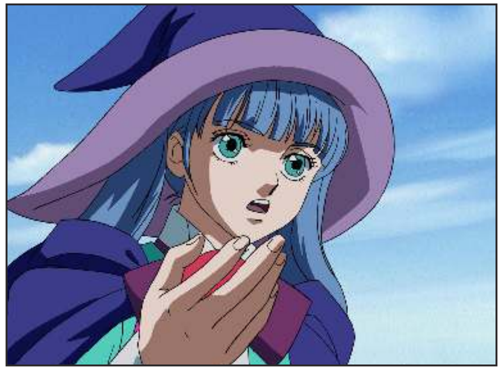
Seed: 1

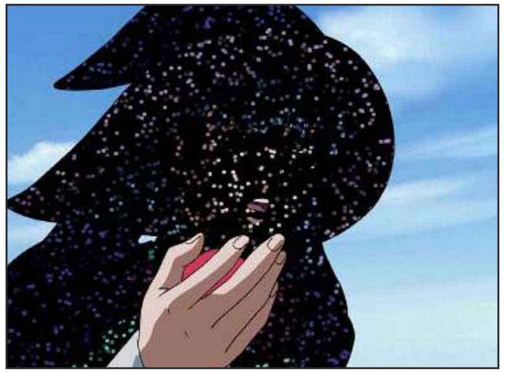
☑ Preview

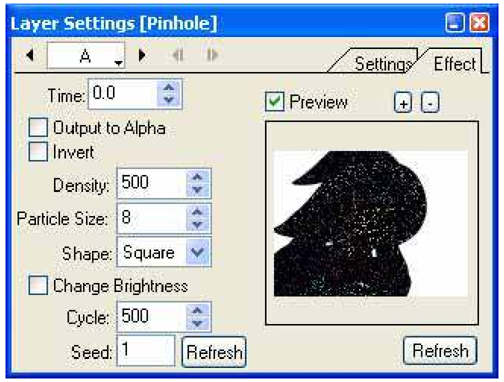
- [Intensity]
  Sets the intensity of the noise.
- [RGB Noise]
  Allows separate application of noise to each of the image R (Red), G (Green) and B (Blue) channels.
- [HSV Noise]
  Allows separate application of noise to each of the image H (Hue), S (Saturation) and V (Value) channels.
- [Alpha Noise]
  Allows application of noise to the alpha channel.
- [Apply Also to Completely Transparent]
  When setting [Alpha Noise], this also applies noise to the completely transparent parts of alpha channels.
- [Still Noise]
  Setting this check box to "On" will generate noise based on [Seeds] that will remain the same in each frame.
- [Seed]
  Sets the seed value used when generating noise. Each time the [Refresh] button is clicked, new noise will be generated. By noting the displayed seed value, it will be possible to generate noise under the same conditions again by inputting the seed value.

Pinhole

Applies an effect in which fine holes (pinholes) are shown in random positions in the layer image.







Time: 0.0
☐ Output to Alpha
☐ Invert
Density: 500
Particle Size: 8
Shape: Square
☐ Change Brightness
Cycle: 500
Seed: 1
☑ Preview

- [Time]
  By changing the time parameter, the generated pinholes will change continuously and smoothly.

- [Output to Alpha]
  Outputs pinholes to the alpha channel.

- [Invert]
  Inverses the pinhole mask.

- [Density]
  Sets the density of the generated pinholes.

- [Particle Size]
  Sets the particle size of the generated pinholes.

- [Shape]
  Selects the shapes of the generated pinholes.
  [Square], [Circle]

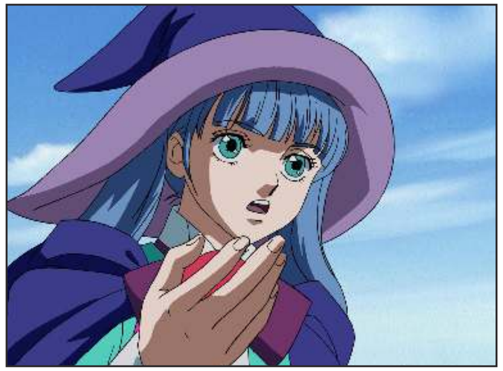
- [Change Brightness]
  Changes the brightness of the pinholes following changes in [Time].

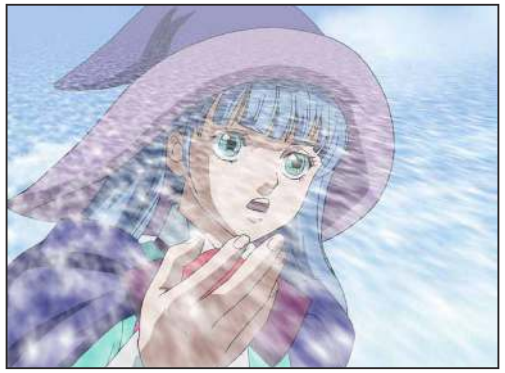
- [Cycle]
  Sets the cycle of the pinhole generation time (Setting the time so that the pinholes will be generated in the same pattern).

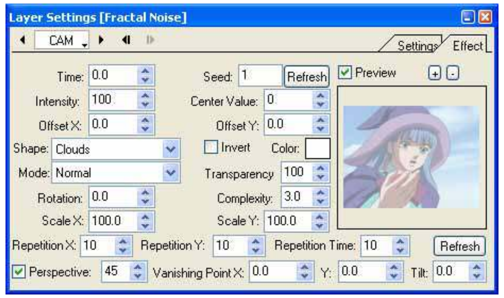
- [Seed]
  Sets the seed value when generating pinholes. Clicking the [Refresh] button will create a new condition of pinholes each time. By noting the displayed seed value, it will be possible to generate pinholes under the same conditions again by inputting the seed value.

Fractal noise

Applies irregular patterns that are unstable such as clouds or smoke.







Time: 0.0
Seed: 1
☑ Preview
Intensity: 100
Center Value: 0
Offset X: 0.0
Offset Y: 0.0
Shape: Clouds
☐ Invert
Color: ☐
Mode: Normal
Transparency 100
Rotation: 0.0
Complexity: 3.0
Scale X: 100.0
Scale Y: 100.0
Repetition X: 10
Repetition Y: 10
Repetition Time: 10
☑ Perspective: 45
Vanishing Point X: 0.0
Y: 0.0
Tilt: 0.0

- [Time]
  By changing the time parameter, the generated fractal noise pattern will change. Due to inbetweening, it will be possible to continuously change the [Time]. Through continuously changing the [Time] value, the generated fractal noise will also change continuously and smoothly.

- [Seed]
  Sets the seed value used for the noise generation. Clicking the [Refresh] button will create new random values each time. By noting the displayed seed value, it will be possible to generate noise under the same conditions again by inputting the seed value.

- [Intensity]
  Sets the noise intensity.

- [Center Value]
  Sets the noise tone center value.

- [Offset X]
  Sets the movement amount in the horizontal direction.

- [Offset Y]
  Sets the movement amount in the vertical direction.

- [Shape]
  Sets the shape of the fractal noise.
  [Clouds], [Turbulence], [Rings], [Annual Rings]

- [Invert]
  Inverts the noise tone.

- [Color]
  Sets the noise color.

- [Mode]
  Allows setting of the compositing mode when compositing the noise generated result with the original image.

  Compositing Modes:[Normal], [Overwrite], [Output to Alpha], [Change Brightness], [Change Saturation], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

- [Transparency]
  Sets the transparency when compositing the result of the noise with the original image.

- [Rotation]
  Rotates the noise pattern when drawing it.

- [Complexity]
  Sets the complexity of the noise pattern.

- [Scale X]
  Sets the enlarge/reduce rate in the noise pattern X direction.

- [Scale Y]
  Sets the enlarge/reduce rate in the noise pattern Y direction.

- [Repetition X]
  Sets the repetition period of the noise pattern X direction. When [Repetition X] is [1], the same pattern will be created each time the X coordinate becomes the [Scale X] value. When set to [2], the same pattern will be generated for each ([Scale X] x 2) value.

- [Repetition Y]
  Sets the repetition period of the noise pattern Y direction.

- [Repetition Time]
  Sets the repetition cycle of the generated fractal noise corresponding to the [Time]. When the [Repetition Time] is set to [1], the fractal noise pattern will complete one cycle when the [Time] parameter reaches [100]. In this case, the fractal noise generated when the [Time] was [1] and the fractal noise generated when the time was [100] will be the same.
  When the [Repetition Time] is set to [2], the fractal noise pattern will complete one cycle when the [Time] parameter reaches [200].

- [Perspective]
  Applies perspective to the noise pattern. Allows setting of the angle (X-axis rotation) by numerical input.

- [Vanishing Point X]
  Sets the X coordinate of the perspective vanishing point.

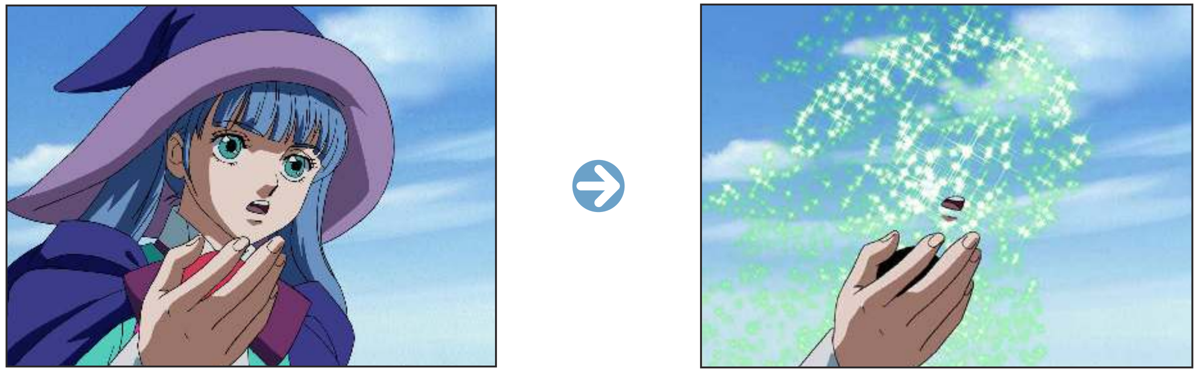
- [Vanishing Point Y]
  Sets the Y coordinate of the perspective vanishing point.

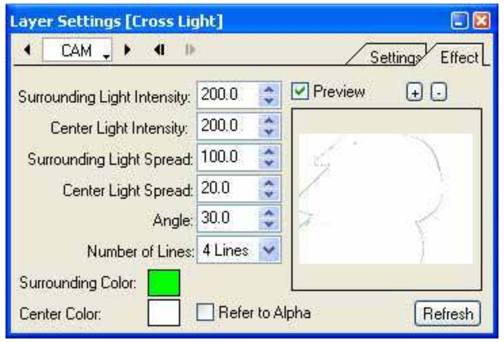
- [Tilt]
  Sets the perspective tilt angle (around Z-axis).

Light

Cross light

Applies a cross light similar to the twinkling of stars according to the pixel brightness.





Surrounding Light Intensity: 200.0
Center Light Intensity: 200.0
Surrounding Light Spread: 100.0
Center Light Spread: 20.0
Angle: 30.0
Number of Lines: 4 Lines
Surrounding Color: 🟩
Center Color: ☐
☑ Preview
☐ Refer to Alpha

In this example, the [Cross Light] has been applied following application of the [Pinhole] effect.

- [Surrounding Light Intensity]
  Sets the intensity of the light surrounding part (cross part).

- [Center Light Intensity]
  Sets the intensity of the light center part.

- [Surrounding Light Spread]
  Sets the spread of the light surrounding part.

- [Center Light Spread]
  Sets the spread of the light center part.

- [Angle]
  Sets the angle of the cross.

- [Number of Lines]
  Sets the number of lines in the cross.

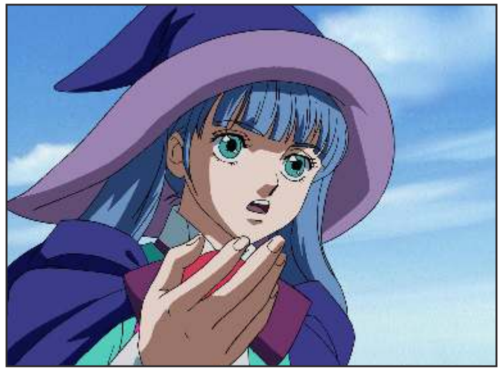
- [Surrounding Color]
  Sets the color of the light surrounding part.

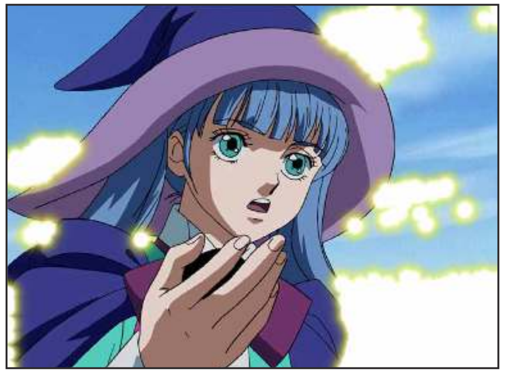
- [Center Color]
  Sets the color of the light center part.

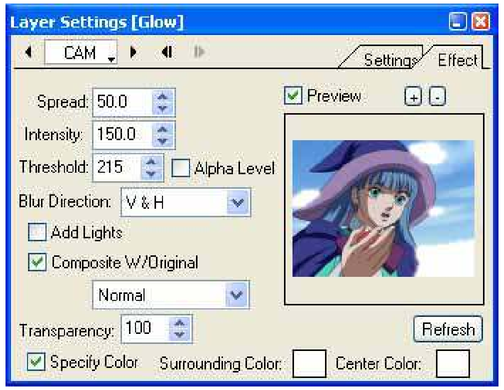
- [Refer to Alpha]
  When this check box is set to "On", reference is made to the alpha channel. When set to "Off", reference is made to RGB.

Glow

Applies a light radiation (glow) effect by brightening the colors and spreading light to surrounding areas.







Layer Settings [Glow]

CAM

Spread: 50.0
Intensity: 150.0
Threshold: 215
☐ Alpha Level
Blur Direction: V & H
☐ Add Lights
☑ Composite W/Original
Normal
Transparency: 100
☑ Preview
☑ Specify Color
Surrounding Color:
Center Color:

- [Spread]
  Sets the spread of the glow.

- [Intensity]
  Sets the intensity of the glow.

- [Threshold]
  Sets the threshold for generating the glow. Light will only be generated for parts that are brighter than this value.

- [Alpha Level]
  When this check box is set to "On", reference is made to the alpha channel and light will be generated from pixels that exceed the threshold. When set to "Off", reference is made to RGB and light will be generated from pixels that exceed the threshold of this color`s brightness.

- [Blur Direction]
  Sets the direction in which the blur is applied.
  [V&H (Vertical and Horizontal Directions)], [H Only(Horizontal Direction Only)], [V Only(Vertical Direction Only)]

- [Add Lights]
  Adds lights together. When this check box is set to "On", the strength of the light will be stronger for larger areas forming the light source. When set to "Off", the brightness will simply be determined by the distance from the light source.

- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the blur with the original image.

  Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen], [composite W/BG]

- [Transparency]
  Sets the [Transparency] when compositing the result of the glow effect with the original image.

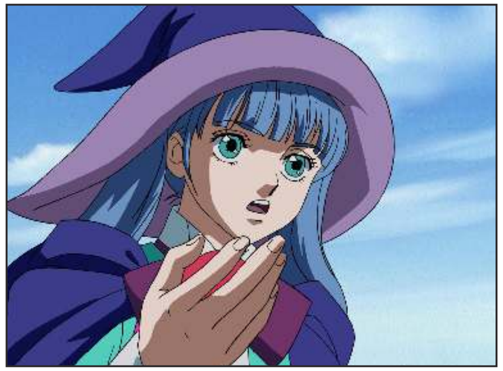
- [Specify Color]
  When this check box is set to "On", the glow [Surrounding Color] and [Center Color] can be set to optional colors.

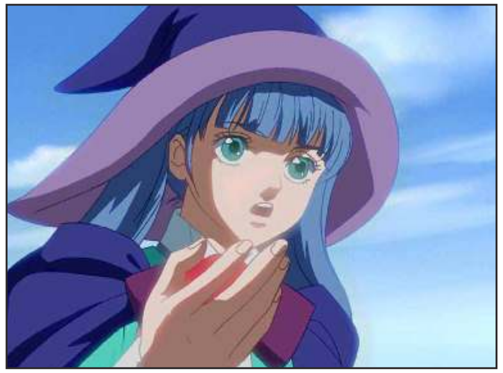
- [Surrounding Color]
  Sets the glow surrounding part color.

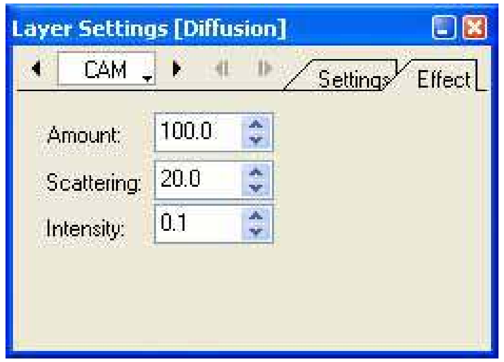
- [Center Color]
  Sets the glow center part color.

Diffusion

Applies a light diffusion effect.







Layer Settings [Diffusion]

CAM

Amount: 100.0
Scattering: 20.0
Intensity: 0.1

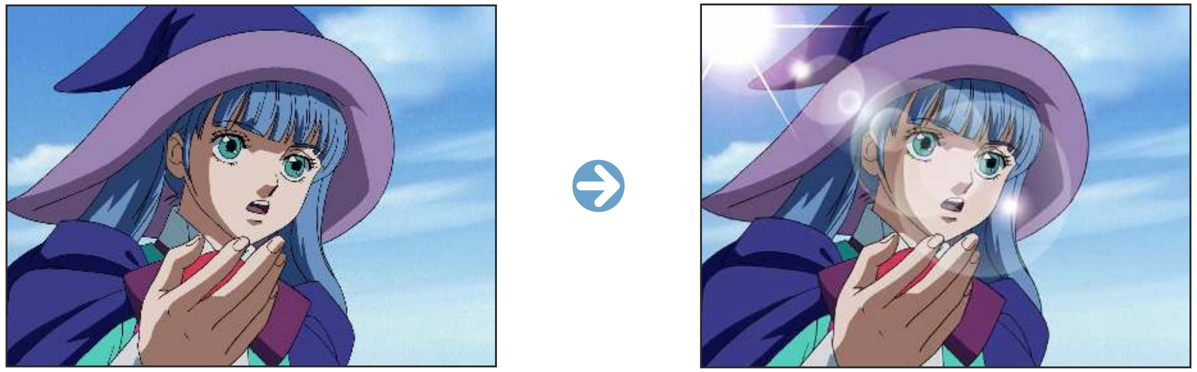
- [Amount]
  Sets the diffusion amount.

- [Scattering]
  Sets the diffusion scattering.

- [Intensity]
  Sets the diffusion intensity.

Lens flare

Adds lens flare (phenomena in which circles or hexagons of light appeared in an image) caused by the refraction of light inside the lens when shooting was carried out against the light. Various patterns are drawn depending on the types of parameters used.



- [Brightness]
  Sets the brightness of the light.

- [Light Source]
  Sets the light source position as an X and Y coordinate.

- [Camera]
  Sets the camera center position as an X and Y coordinate. This will influence the ghost occurrence direction.
  * It is also possible to set the light source and camera positions by dragging the positions in the preview area.

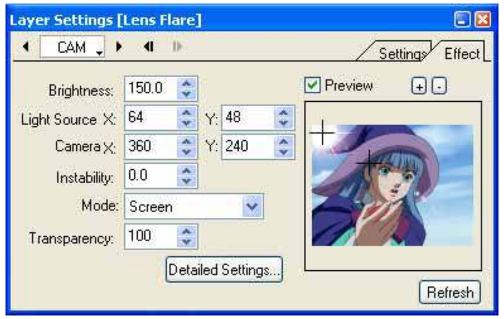
- [Instability]
  Sets the instability of the light. Every time the value is made larger, the fine light rays (sub light rays) will randomly rotate.

- [Mode]
  Allows setting of the compositing mode when combining the result of the generated lens flare with the original image.

  Compositing Modes:[Normal], [Overwrite], [Output to Alpha], [Add], [Lighter], [Darker], [Subtract], [Difference], [Multiply], [Screen], [Composite W/BG]

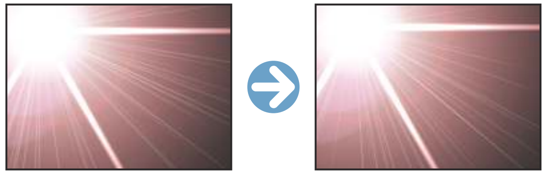
- [Transparency]
  Sets the transparency when compositing the result of the generated lens flare with the original image.

- [Detailed Settings...]
  Click this button to show the [Lens Flare Detailed Settings] dialog box.



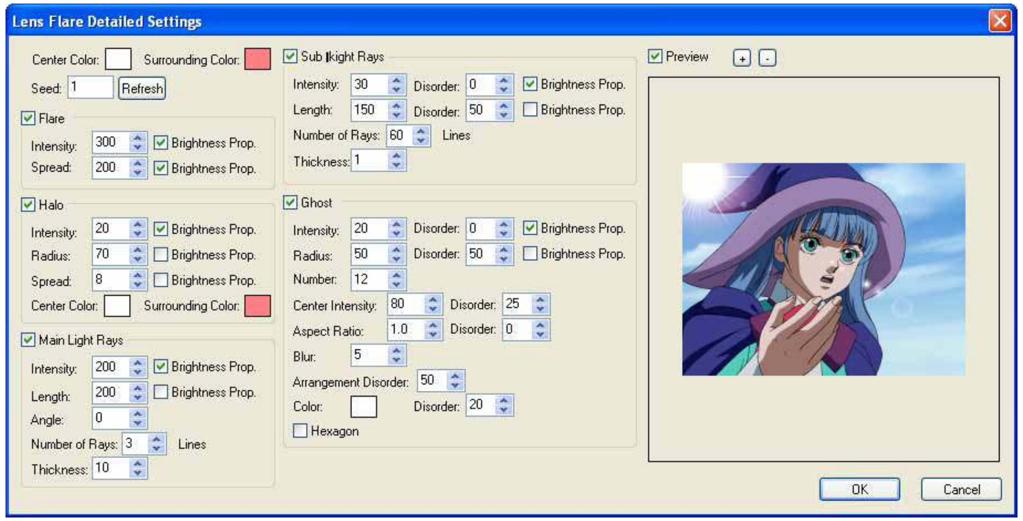
Layer Settings [Lens Flare]

Brightness: 150.0
Light Source X: 64 Y: 48
Camera X: 360 Y: 240
Instability: 0.0
Mode: Screen
Transparency: 100
☑ Preview



[Instability]

- [Lens Flare Detailed Settings] dialog box



Lens Flare Detailed Settings

Center Color: ☐ Surrounding Color: 🟥
Seed: 1

☑ Flare
Intensity: 300 ☑ Brightness Prop.
Spread: 200 ☑ Brightness Prop.

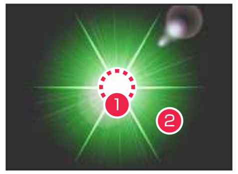
☑ Halo
Intensity: 20 ☑ Brightness Prop.
Radius: 70 ☐ Brightness Prop.
Spread: 8 ☐ Brightness Prop.
Center Color: ☐ Surrounding Color: 🟥

☑ Main Light Rays
Intensity: 200 ☑ Brightness Prop.
Length: 200 ☐ Brightness Prop.
Angle: 0
Number of Rays: 3 Lines
Thickness: 10

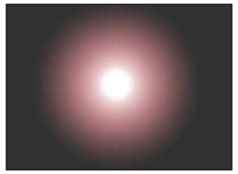
☑ Sub Ikight Rays
Intensity: 30 Disorder: 0 ☑ Brightness Prop.
Length: 150 Disorder: 50 ☐ Brightness Prop.
Number of Rays: 60 Lines
Thickness: 1

☑ Ghost
Intensity: 20 Disorder: 0 ☑ Brightness Prop.
Radius: 50 Disorder: 50 ☐ Brightness Prop.
Number: 12
Center Intensity: 80 Disorder: 25
Aspect Ratio: 1.0 Disorder: 0
Blur: 5
Arrangement Disorder: 50
Color: ☐ Disorder: 20
☐ Hexagon

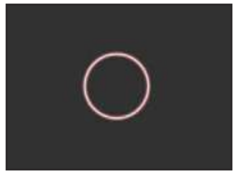
☑ Preview



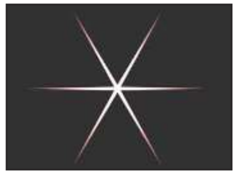
① Center color
② Surrounding color



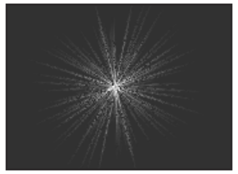
Flare



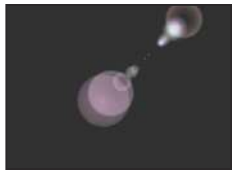
Halo



Main light rays



Sub light rays



Ghost

- [Center Color]
  Sets the light center color.

- [Surrounding Color]
  Sets the light surrounding color.

[Seed]
Sets the seed value when generating the lens flare. Clicking the [Refresh] button will create a new condition of lens flare each time. By noting the displayed seed value, it will be possible to generate the same condition of lens flare again by inputting the seed value.

[Flare]
Sets the fuzzy area (flare) seen surrounding the light.

- [Intensity]
  Sets the intensity of the flare.

- [Spread]
  Sets the degree of spread of the flare.

- [Brightness Prop.]
  Changes the parameter in proportion to [Brightness] in the layer settings palette.

[Halo]

Sets the part that appears as a ring of light (halo) around the light.

- [Intensity]
  Sets the intensity of the halo.

- [Radius]
  Sets the radius of the halo.

- [Spread]
  Sets the degree of spread of the halo.

- [Brightness Prop.]
  Changes the parameter in proportion to [Brightness] in the layer settings palette.

- [Center Color]
  Sets the center color of the halo.

- [Surrounding Color]
  Sets the surrounding color of the halo.

[Main Light Rays]

Sets the central light rays (main light rays).

- [Intensity]
  Sets the intensity of the main light rays.

- [Length]
  Sets the length of the main light rays.

- [Brightness Prop.]
  Changes the parameter in proportion to [Brightness] in the layer settings palette.

- [Angle]
  Sets the angle of the main light rays. The larger the number, the larger the amount that the thick light rays will be rotated in the clockwise direction.

- [Number of Rays]
  Sets the number of main light rays.

- [Thickness]
  Sets the thickness of the main light rays.

[Sub Light Rays]

Sets the fine light rays (sub light rays) surrounding the main light rays.

- [Intensity]
  Sets the intensity of the sub light rays.

- [Length]
  Sets the length of the sub light rays.

- [Disorder]
  Sets the degree of disorder of the parameters.

- [Brightness Prop.]
  Changes the parameter in proportion to [Brightness] in the layer settings palette.

- [Number of Rays]
  Sets the number of sub light rays.

- [Thickness]
  Sets the thickness of the sub light rays.

[Ghost]

Sets the phenomena in which distinct shapes (ghosts) unexpectedly appear in images due to the reflection of a tiny amount of light from the lens surface in a different surface (internal reflection).

- [Intensity]
  Sets the intensity of the ghost.

- [Radius]
  Sets the radius of the ghost.

- [Disorder]
  Sets the degree of disorder of the parameters.

- [Brightness Prop.]
  Changes the parameter in proportion to [Brightness] in the layer settings palette.

- [Number]
  Sets the number of ghosts.

- [Center Intensity]
  Sets whether the brightness will be concentrated in the center or concentrated in the surroundings.

- [Aspect Ratio]
  Sets the aspect ratio of the ghost.

- [Blur]
  Sets the degree of blur of the ghost.

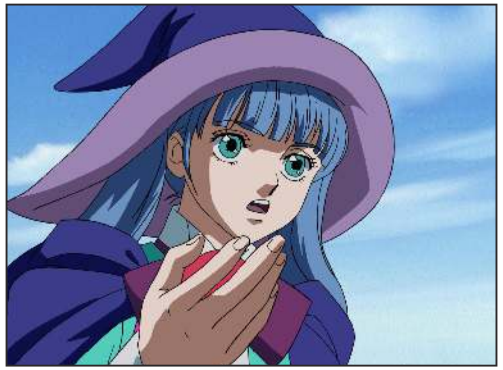
- [Arrangement Disorder]
  Sets the degree of disorder in the arrangement of the ghost.

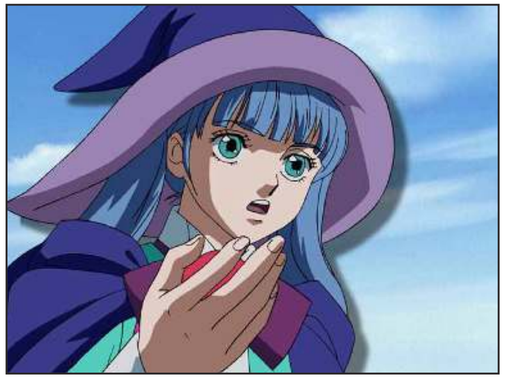
- [Color]
  Sets the color of the ghost.

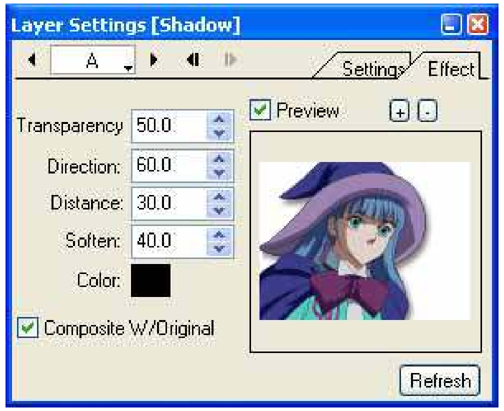
- [Hexagon]
  When set to "On", the ghost will be hexagonal. When set to "Off", the ghost will be circular.

Shadow

Applies a shadow (drop shadow) effect to the background layer.







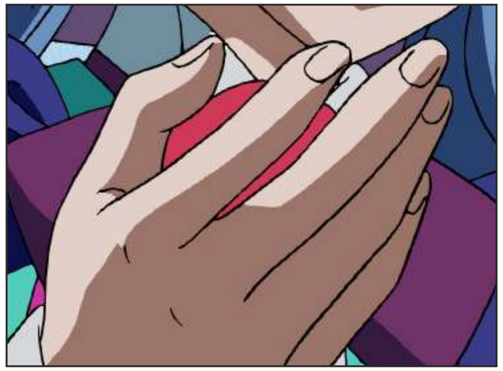
Layer Settings [Shadow]

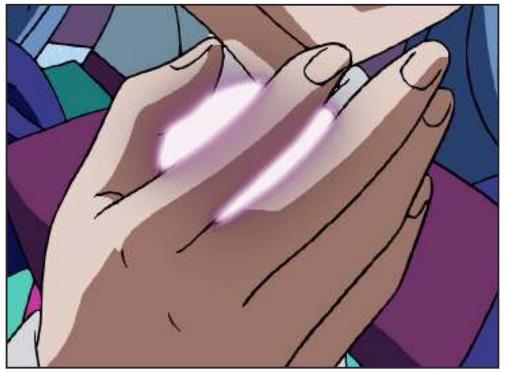
Transparency 50.0
Direction: 60.0
Distance: 30.0
Soften: 40.0
Color: ■
☑ Composite W/Original
☑ Preview

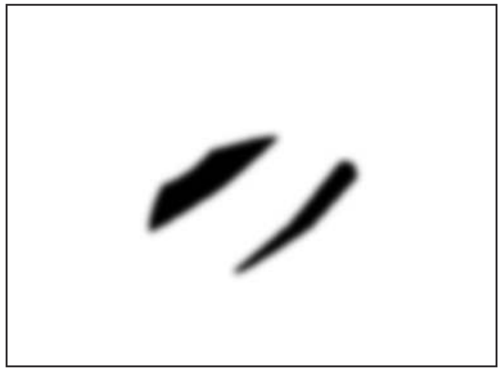
- [Transparency]
  Sets the transparency of the shadow.
- [Direction]
  Sets the direction of the shadow.
- [Distance]
  Sets the distance that the shadow will be separated from the image.
- [Soften]
  Sets the amount of blur that will be set to the shadow edge parts.
- [Color]
  Sets the color of the shadow.
- [Composite W/Original]
  Sets whether the shadow will be composited with the original image. When this is set to "Off", only the shadow will be generated.

Backlight

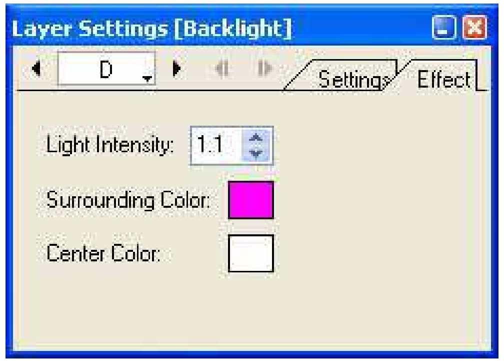
Changes the pixel brightness to a backlight color based on the mask image.







[Backlight] Mask



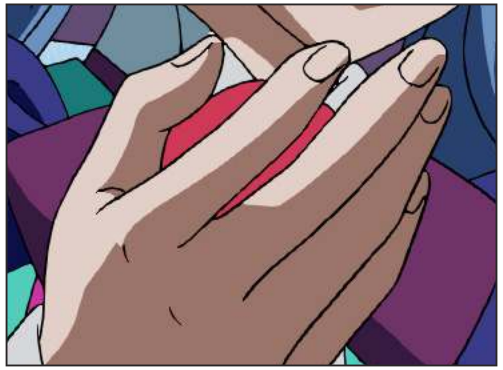
Layer Settings [Backlight]

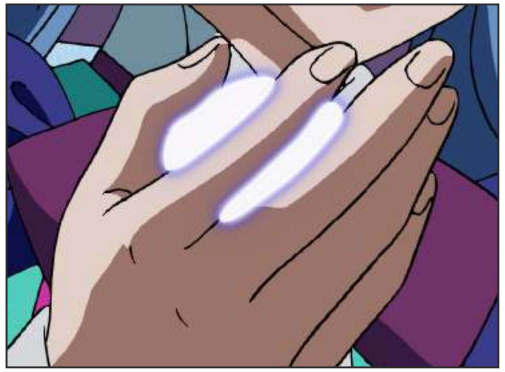
Light Intensity: 1.1
Surrounding Color: 🟪
Center Color: ☐

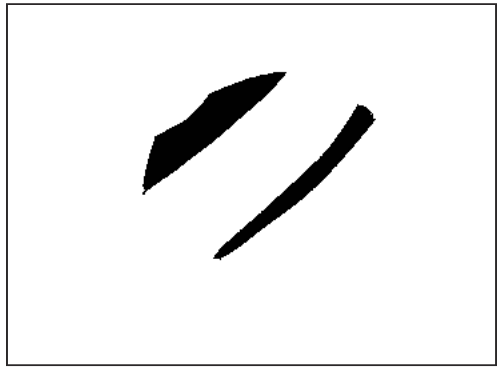
- [Light Intensity]
  Sets the intensity of the backlighting.
- [Surrounding Color]
  Sets the color of the surrounding part of the backlighting.
- [Center Color]
  Sets the color of the center part of the backlighting.

Backlight 2

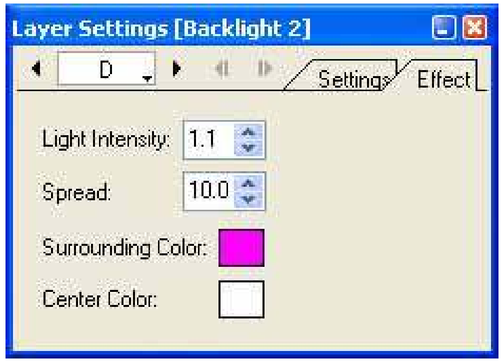
Applies an effect based on the mask image in which light appears to be spilling out according to the pixel brightness. The difference from the [Backlight] effect is that it is not necessary to apply blur to the mask.







[Backlight 2] Mask



Layer Settings [Backlight 2]

Light Intensity: 1.1

Spread: 10.0

Surrounding Color: 🟪

Center Color: ☐

- [Light Intensity]
  Sets the intensity of the backlighting.

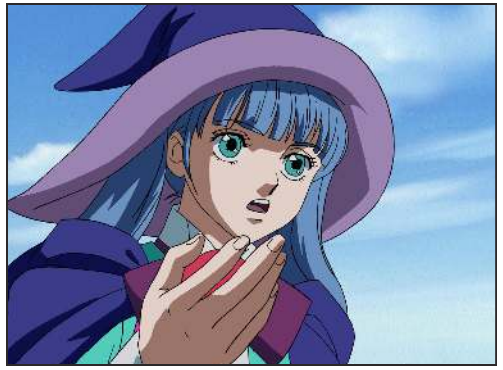
- [Spread]
  Sets the degree of spread of the backlighting.

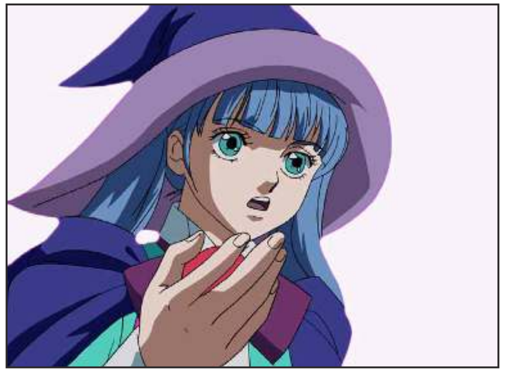
- [Surrounding Color]
  Sets the color of the surrounding part of the backlighting.

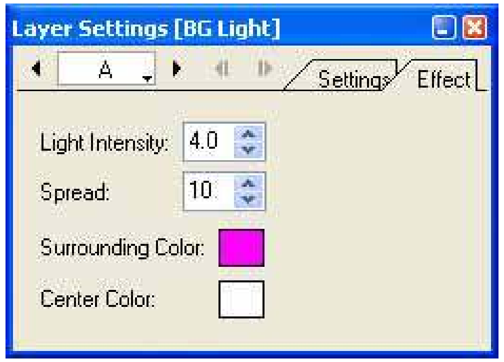
- [Center Color]
  Sets the color of the center part of the backlighting.

BG light

Applies an effect on the layer image alpha channel as though light is shining out from the background.







Layer Settings [BG Light]

Light Intensity: 4.0

Spread: 10

Surrounding Color: 🟪

Center Color: ☐

- [Light Intensity]
  Sets the intensity of the backlighting.

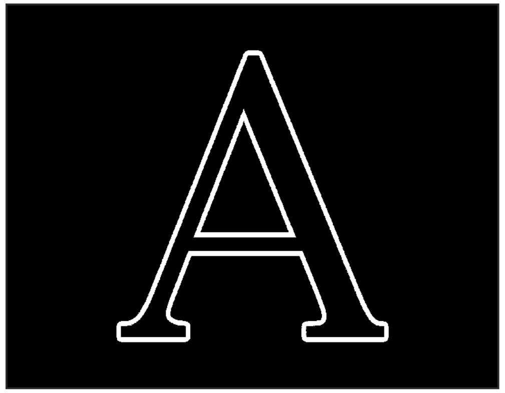
- [Spread]
  Sets the degree of spread of the backlighting.

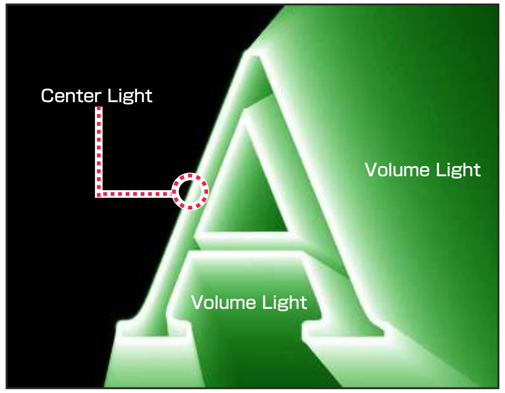
- [Surrounding Color]
  Sets the color of the surrounding part of the backlighting.

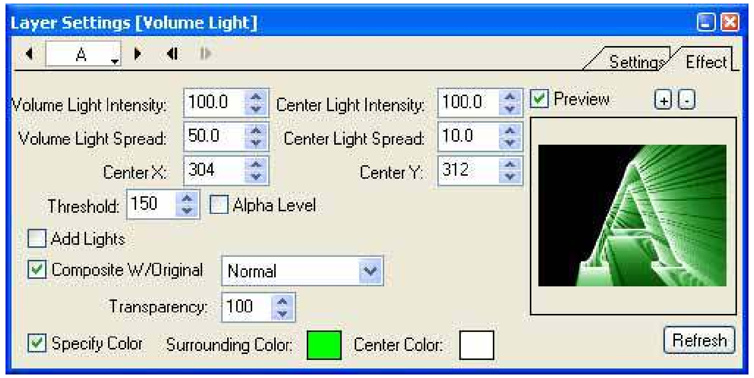
- [Center Color]
  Sets the color of the center part of the backlighting.

Volume light

Generates light that appears to shine out radially from a light source, according to the brightness of the layer image pixels.







Volume Light Intensity: 100.0
Center Light Intensity: 100.0
Volume Light Spread: 50.0
Center Light Spread: 10.0
Center X: 304
Center Y: 312
Threshold: 150
☐ Alpha Level
☐ Add Lights
☑ Composite W/Original: Normal
Transparency: 100
☑ Specify Color
Surrounding Color: 🟩
Center Color: ☐

- [Volume Light Intensity]
  Sets the intensity of the radial light.

- [Center Light Intensity]
  Sets the intensity of the center part of the radial light.

- [Volume Light Spread]
  Sets the spread of the radial light.

- [Center Light Spread]
  Sets the spread of the center part of the radial light.

- [Center X]
  Sets the X coordinate of the center of the radiation.

- [Center Y]
  Sets the Y coordinate of the center of the radiation.

- [Threshold]
  Sets the threshold when generating the radial light. Light will only be generated by parts brighter than this value.

- [Alpha Level]
  When this check box is set to "On", reference is made to the alpha channel and the radial light will be generated from pixels that exceed the threshold. When set to "Off", reference is made to RGB and radial light will be generated from pixels that exceed the threshold of the color luminance.

- [Add Lights]
  When this check box is set to "On", the strength of the light will be stronger for larger areas forming the light source. When set to "Off", the brightness will simply be determined by the distance from the light source.

- [Composite W/Original]
  Allows setting of the compositing mode when combining the result of the generated radial light with the original image.

  Compositing Modes:[Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen], [Composite W/BG]

- [Transparency]
  Sets the transparency when compositing the result of the generated radial light with the original image.

- [Specify Color]
  When this check box is set to "On", the radial light [Surrounding Color] and [Center Color] may be set to optional colors.

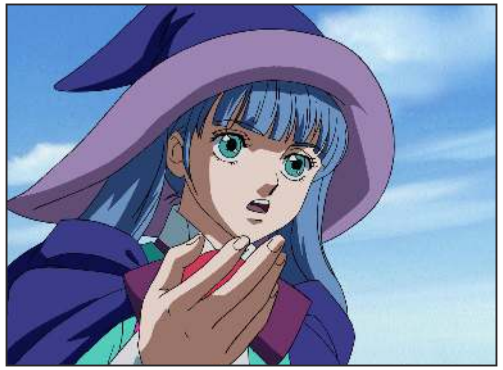
- [Surrounding Color]
  Sets the radial light surrounding part color.

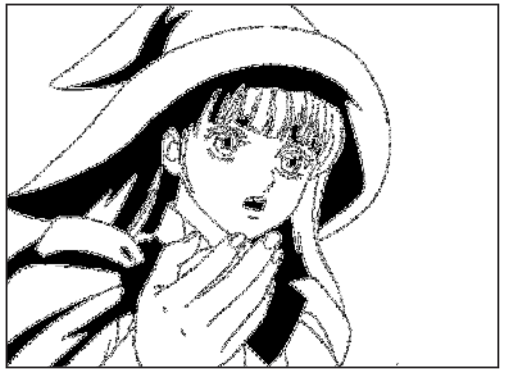
- [Center Color]
  Sets the radial light center part color.

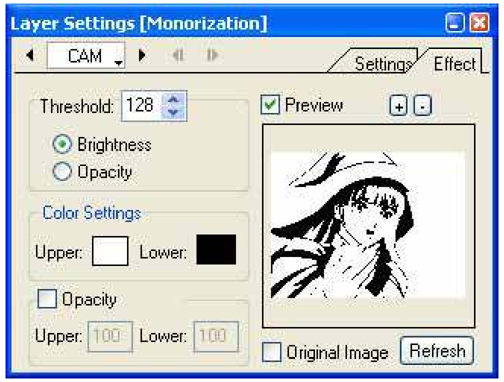
Tone adjustment

Monorization

Changes image to a monorized image that does not contain mid-tones.






Layer Settings [Monorization]
CAM
Settings
Effect
Color Settings
Refresh

Threshold: 128

● Brightness

○ Opacity

Upper: ☐ Lower: ■

☐ Opacity

Upper: 100 Lower: 100

☑ Preview

☐ Original Image

[Threshold]
Sets the threshold for implementing the monorization.

- [Brightness]
  Applies the threshold regarding the image brightness.

- [Opacity]
  Applies the threshold regarding the image opacity.

[Color Settings]

- [Upper]
  Sets the color for pixels larger than the threshold.

- [Lower]
  Sets the color for pixels smaller than the threshold.

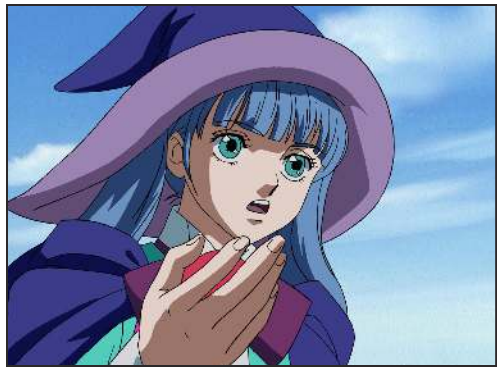
[Opacity]

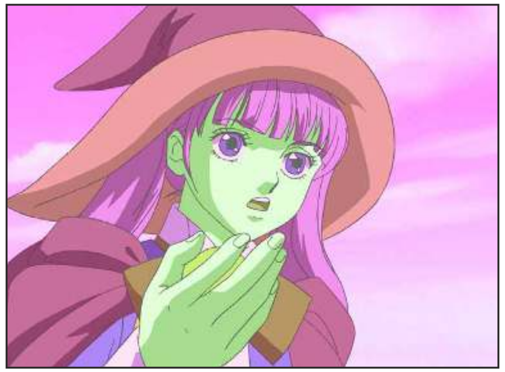
- [Upper]
  Sets the degree of opacity for pixels larger than the threshold.

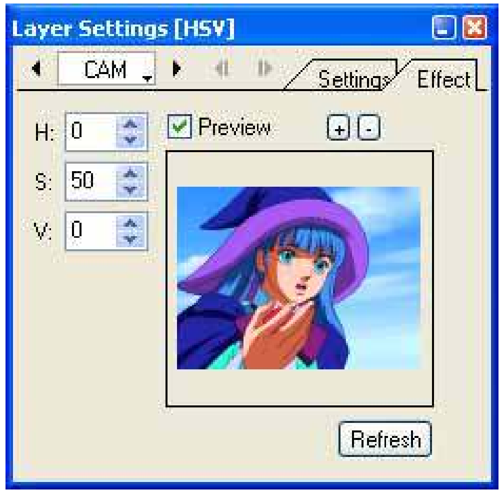
- [Lower]
  Sets the degree of opacity for pixels smaller than the threshold.

HSV

Adjusts the HSV values to change the color tone.






Layer Settings [HSV]
CAM
Settings
Effect
Refresh

H: 0

S: 50

V: 0

☑ Preview

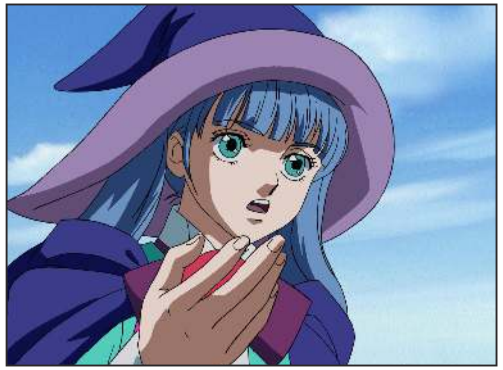
- [H]
  Sets the amount of change to the image hue.

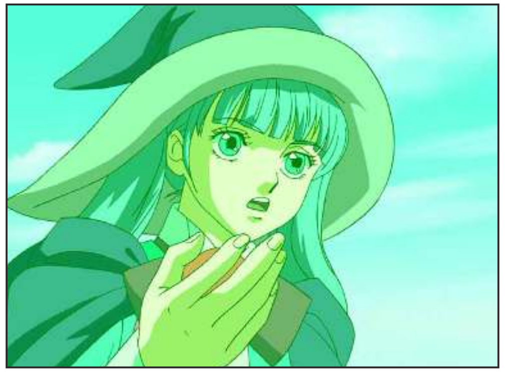
- [S]
  Sets the amount of change to the image saturation.

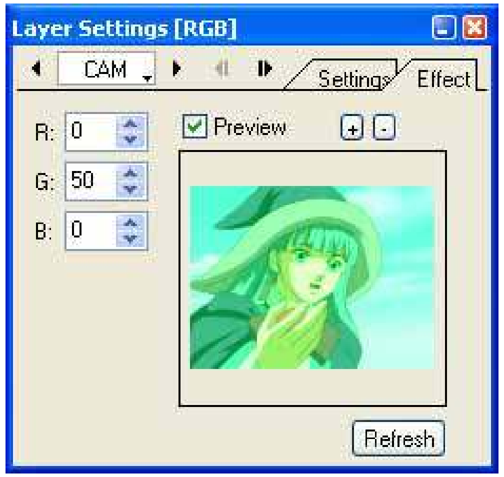
- [V]
  Sets the amount of change to the image value.

RGB

Adjusts the RGB values to change the color tone of the layer image.







Layer Settings [RGB]
CAM
Settings
Effect
Refresh

R: 0

G: 50

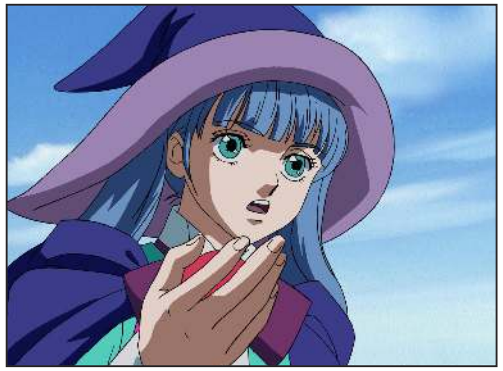
B: 0

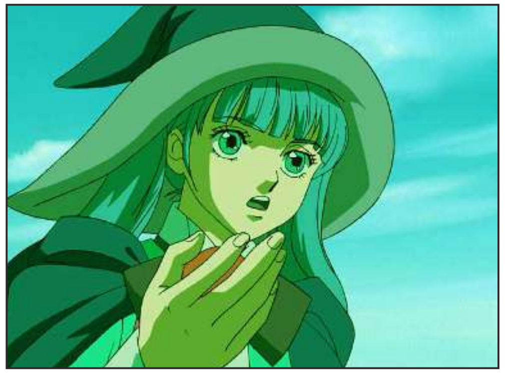
☑ Preview

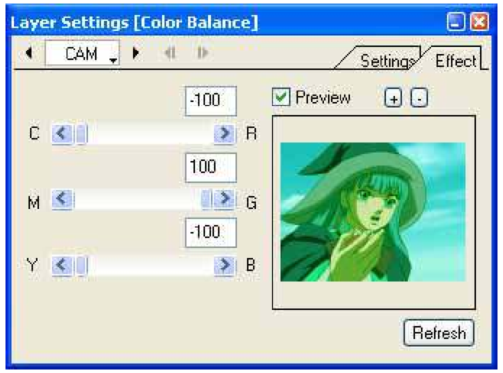
- [R]
  Sets the amount of change to the image red.
- [G]
  Sets the amount of change to the image green.
- [B]
  Sets the amount of change to the image blue.

Color balance

Carries out operation of the color balance of the layer image.







Layer Settings [Color Balance]
CAM
Settings
Effect
Refresh

C -100 R

M 100 G

Y -100 B

☑ Preview

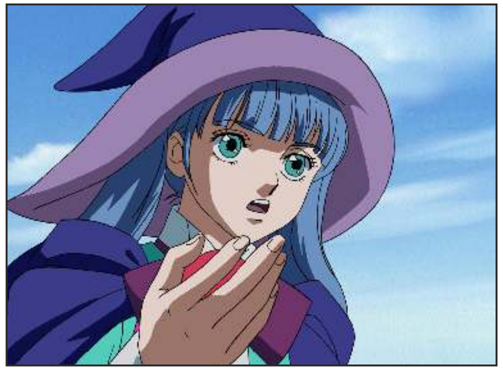
Each of the RGB and CMY colors are shown as complementary color relationships. By moving the slider to the complementary color side, it will be possible to weaken a specified color.

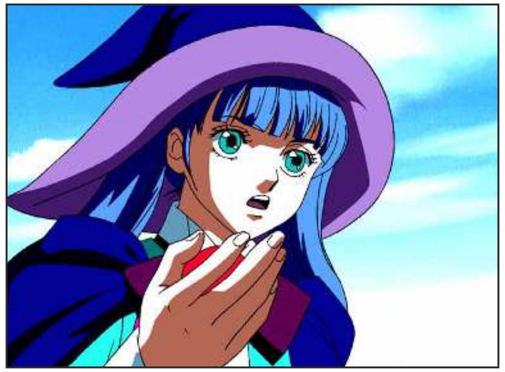
- [C]
  Shows cyan.
- [M]
  Shows magenta.
- [Y]
  Shows yellow.

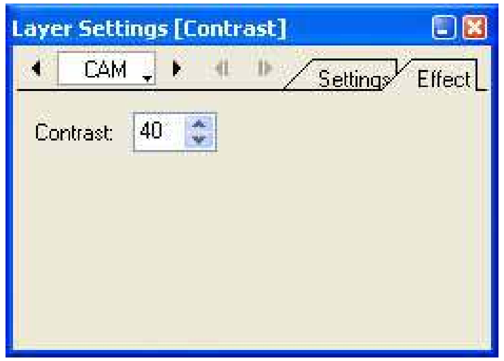
- [R]
  Shows red.
- [G]
  Shows green.
- [B]
  Shows blue.

Contrast

Applies contrast adjustment.





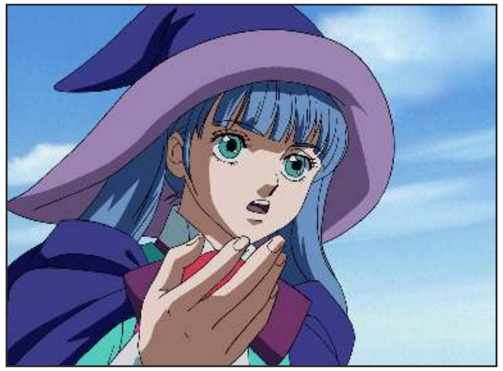

Layer Settings [Contrast]
CAM
Settings
Effect

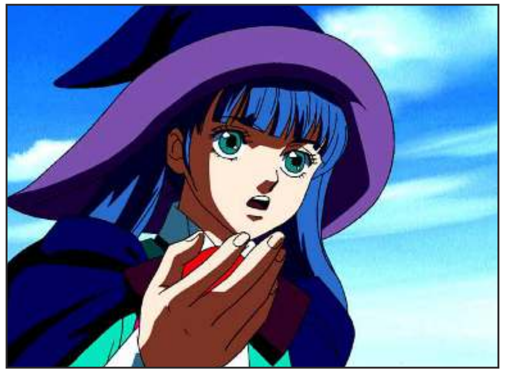
Contrast: 40

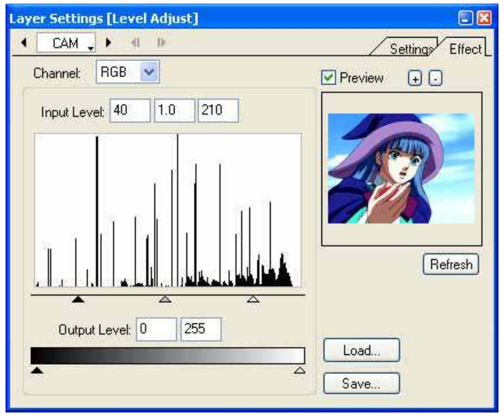
- [Contrast]
  Allows setting of the image contrast by numerical input.

Level adjust

Compensates the image brightness using a histogram (a bar graph showing the distribution of image brightness).






Layer Settings [Level Adjust]
CAM
Settings
Effect
Refresh
Load...
Save...

Channel: RGB

☑ Preview

Input Level: 40 1.0 210

Output Level: 0 255

- [Channel]
  Sets the target color channel
  [RGB], [R], [G], [B]

- [Input Level]
  Sets the width of the color information shown on the histogram.

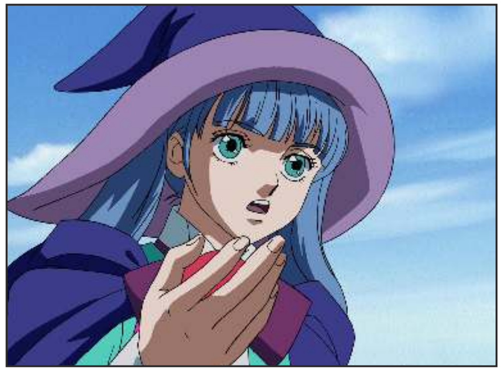
- [Output Level]
  Allows narrowing of the image output level to a narrower range between 0-255.

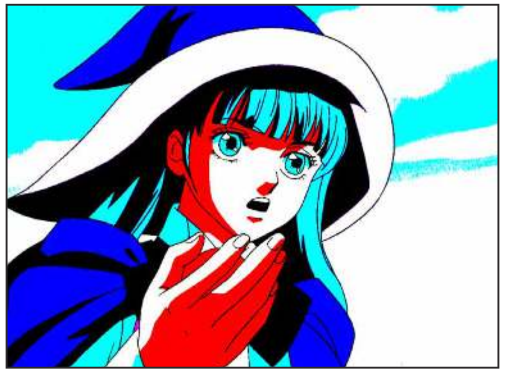
- [Load...]
  Reads in level adjust settings.

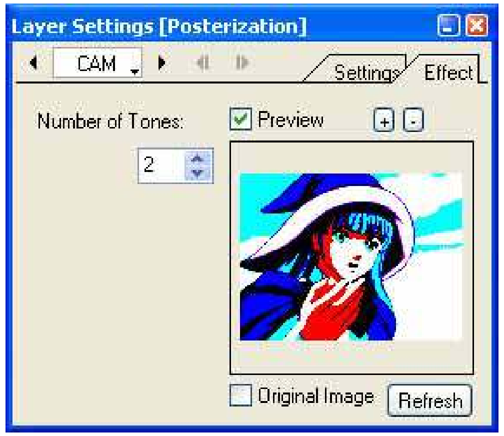
- [Save...]
  Saves level adjust settings.

Posterization

Reduces to the set number of color tones in the image.







Layer Settings [Posterization]

Number of Tones: 2

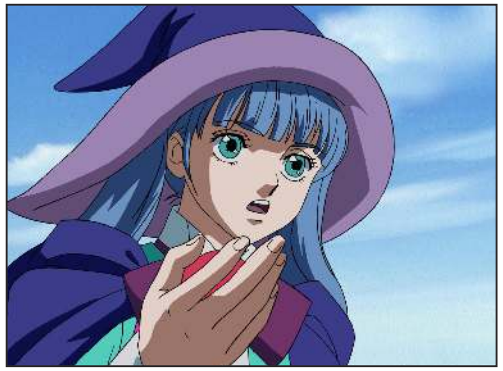
☑ Preview

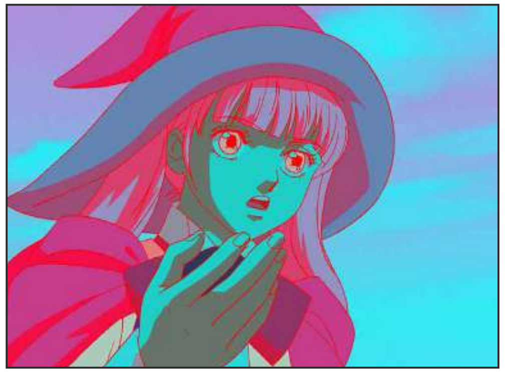
☐ Original Image

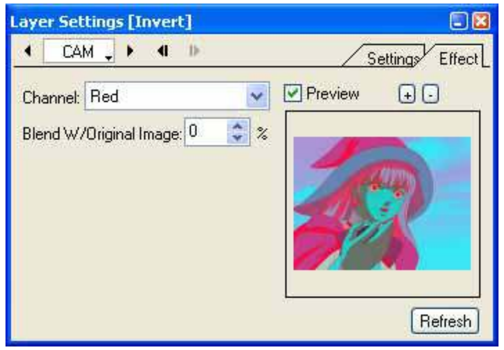
- [Number of Tones]
  Sets the number of tones.

Invert

Applies an effect in which the tones are inverted. This is the same effect as a negative/positive inversion.







Layer Settings [Invert]

Channel: Red

Blend W/Original Image: 0 %

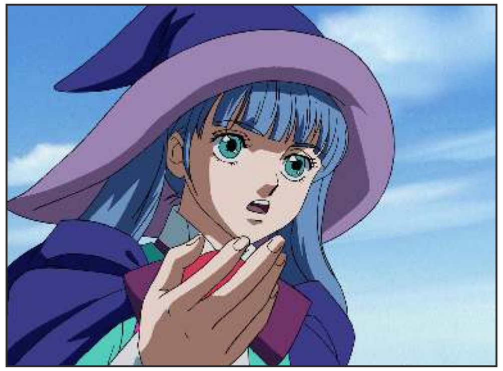
☑ Preview

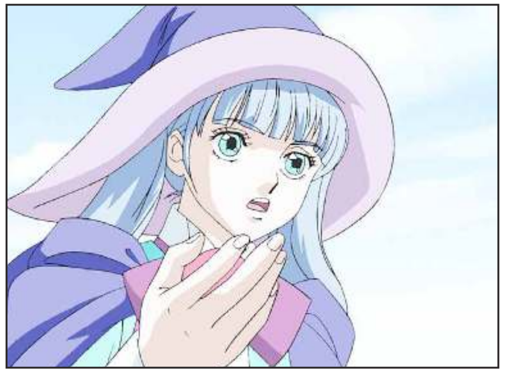
- [Channel]
  Selects the target color channel.
  [RGB], [Red], [Green], [Blue], [HLS], [Hue], [Value], [Saturation], [YIQ], [Luminance], [I Signal Chrominance], [Q Signal Chrominance], [Alpha]

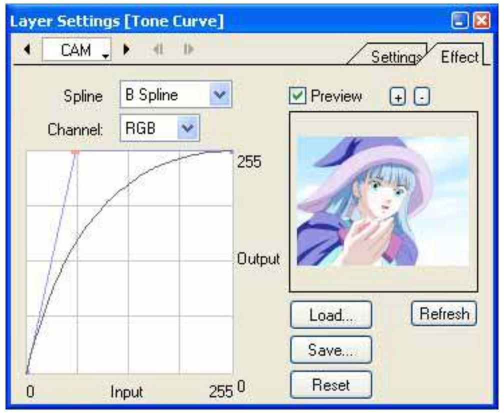
- [Blend W/Original Image]
  Sets the tone proportion when compositing with the target original image.

Tone curve

Adjusts the tone curve.






Layer Settings [Tone Curve]

Spline: B Spline

Channel: RGB

☑ Preview
CAM
Settings
Effect
255
Output
0
Input
255
0
Load...
Refresh
Save...
Reset

- [Spline]
  Selects the tone curve inbetweening mode.
  [B Spline] [Bezier]

- [Channel]
  Sets the target color channel.
  [RGB], [R], [G], [B]

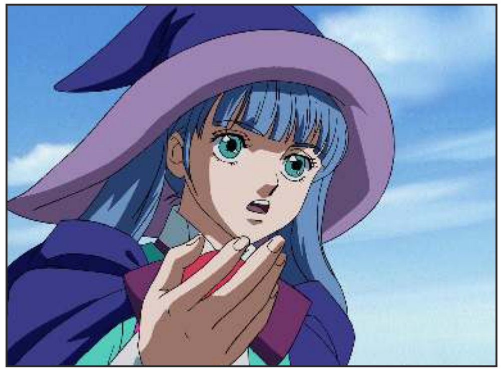
- [Load...]
  Reads in tone curve settings.

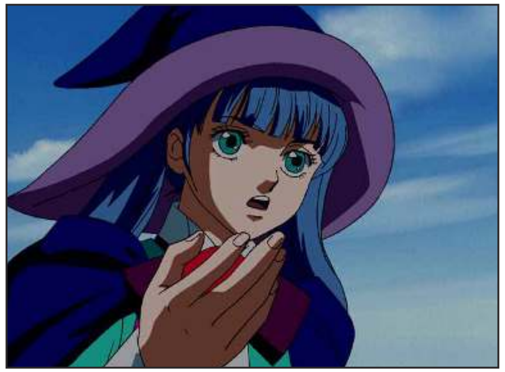
- [Save...]
  Saves tone curve settings.

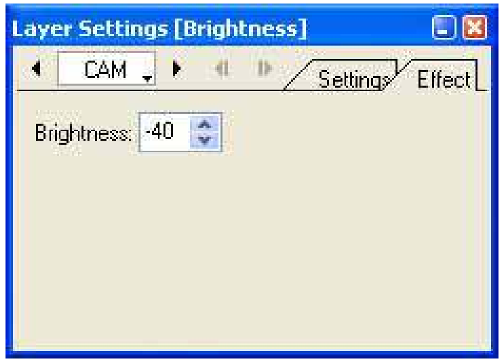
- [Reset]
  Resets the tone curve settings.

Brightness

Adjusts the brightness of the layer image.






Layer Settings [Brightness]

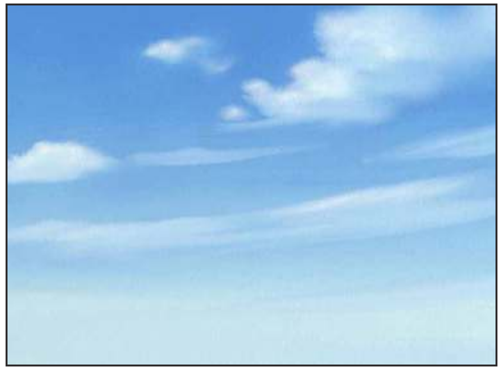
Brightness: -40
CAM
Settings
Effect

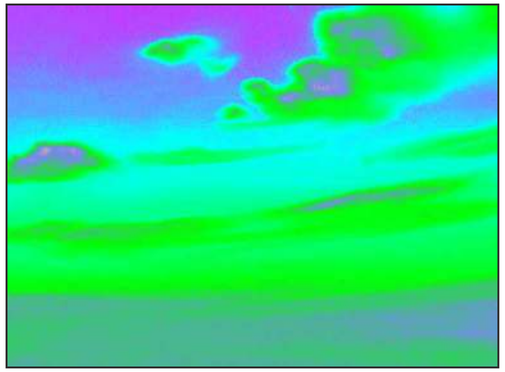
- [Brightness]
  Adjusts the brightness of the image.

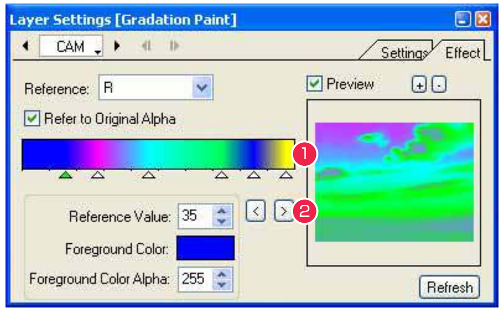
Coloring

Gradation paint

Applies a gradient effect according to the tone of the layer image.







Layer Settings [Gradation Paint]

Reference: R

☑ Refer to Original Alpha

Reference Value: 35

Foreground Color: 🟦

Foreground Color Alpha: 255

☑ Preview

- [Reference]
  [R], [G], [B], [Alpha], or [Luminescence] can be selected as the reference destination.

- [Refer to Original Alpha]
  Reference is made to the alpha channel of the original image.

- [Reference Value]
  Specifies the output level reference value of the original image.
  It is also possible to move the currently selected triangular mark below the slider by directly inputting values.

- [Foreground Color]
  It is possible to select the foreground color by selecting a triangular mark below the slider and clicking this box.

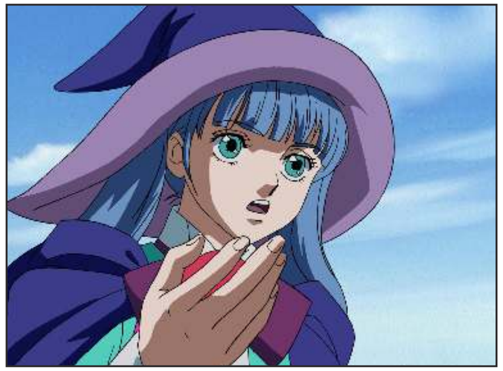
- [Foreground Color Alpha]
  Specifies the numerical value for replacing the alpha during drawing.

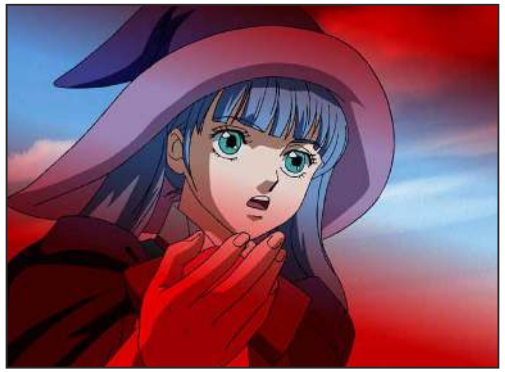
❶ Gradation Scale
Clicking below the scale will display a triangular mark that can be used to specify the image output level reference value and replacement color.

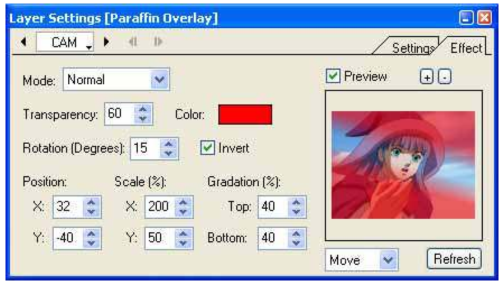
❷ Selection Buttons
Click these buttons to switch the selected triangular mark.

Paraffin overlay

Applies a [Paraffin Overlay (Colored paraffin filter)] effect to the layer image.







Layer Settings [Paraffin Overlay]

Mode: Normal

Transparency: 60

Color: 🟥

Rotation (Degrees): 15

☑ Invert

Position: X: 32 Y: -40

Scale (%): X: 200 Y: 50

Gradation (%): Top: 40 Bottom: 40

☑ Preview

Move

- [Mode]
  Allows setting of the compositing mode when combining the paraffin overlay result with the original image.
  [Normal], [Add], [Lighten], [Darken], [Subtract], [Difference], [Multiply], [Screen]

- [Transparency]
  Sets the transparency when compositing the result of the paraffin overlay with the original image.

- [Color]
  Sets the color of the paraffin filter.

- [Rotation (Degrees)]
  Sets the rotation of the paraffin overlay.

- [Invert]
  Inverses the part that is affected by the paraffin overlay.

- [Position]
  Sets the position of the paraffin overlay.

- [Scale]
  Sets the size of the paraffin overlay.

- [Gradation]
  Sets the gradient width of the paraffin overlay.

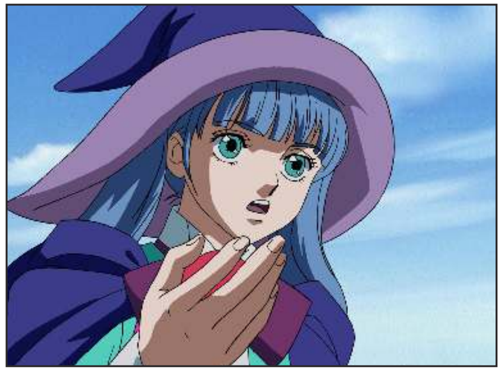
- [Hand/Move]
  Switches between the Hand and Move modes.

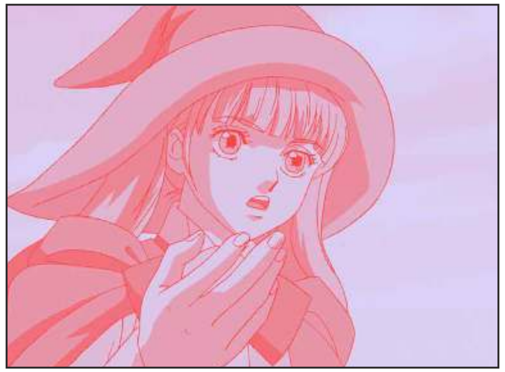
  [Hand]
  Allows adjustment of the view position by dragging the preview image shown in the preview. The position of the paraffin overlay does not change.

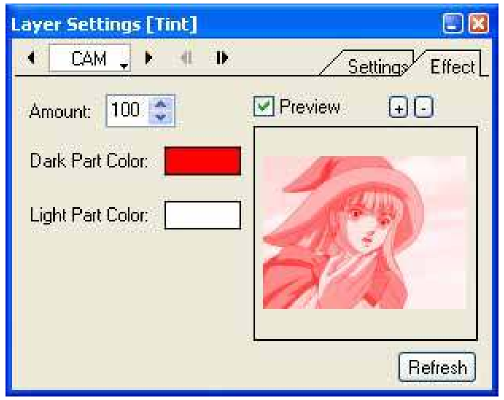
  [Move]
  Allows adjustment of the paraffin overlay position by dragging the preview. This is liked with [Position]. The preview image will not move.

Tint

Applies a color tone such as black and white or sepia.







Layer Settings [Tint]

Amount: 100

Dark Part Color: 🟥

Light Part Color: ☐

☑ Preview

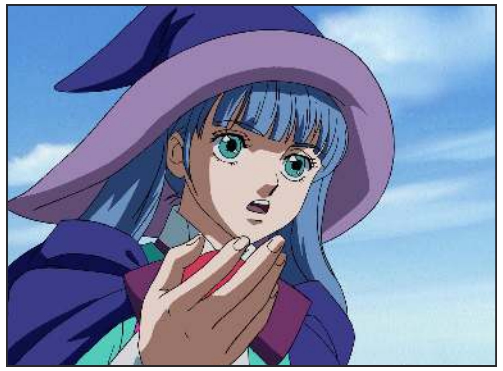
- [Amount]
  Sets the amount by which the tinting is to be changed.

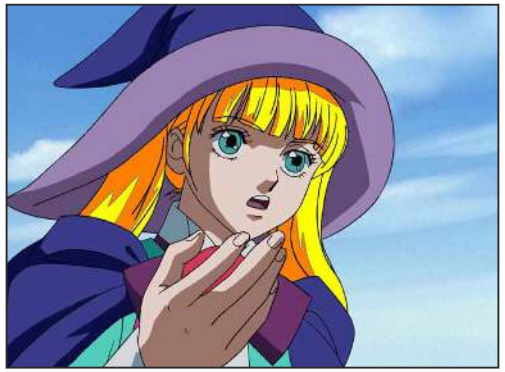
- [Dark Part Color]
  Changes the darker parts of the image to the set color.

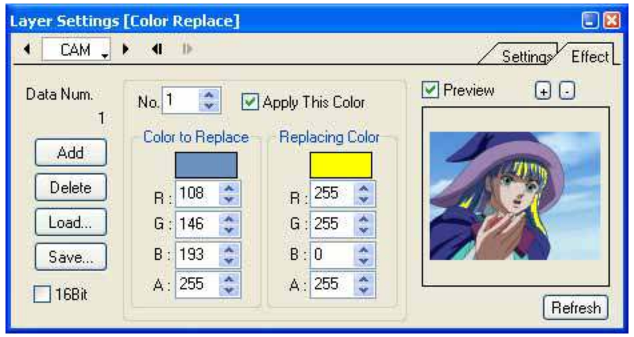
- [Light Part Color]
  Changes the lighter parts of the image to the set color.

Color replace

Allows replacement of a specified color with a different color. It is used when parts have been mistakenly filled or when specific colors are to be changed. It is also possible to use this effect by reading in color replacement setting files (extension: src) created using PaintMan HD.







Layer Settings [Color Replace]

Data Num. 1

No. 1

☑ Apply This Color

Color to Replace: R: 108, G: 146, B: 193, A: 255

Replacing Color: R: 255, G: 255, B: 0, A: 255

☐ 16Bit

☑ Preview

- [Data Num.]
  Shows the number of the specified color replacement list.

- [Add]
  Newly adds color replacement data.

- [Delete]
  Deletes the currently displayed color replacement data.

- [Load...]
  Reads in a color replacement setting file (extension: src).

- [Save...]
  Saves the color replacement data as a color replacement setting file (extension: src).

- [16bit]
  Sets the channel view of [Color to Replace] and [Replacing Color] to 16bit.

- [No.]
  Shows the number of the color replacement list.

- [Apply This Color]
  Sets the color of the data shown in [No.] as the replacement target.

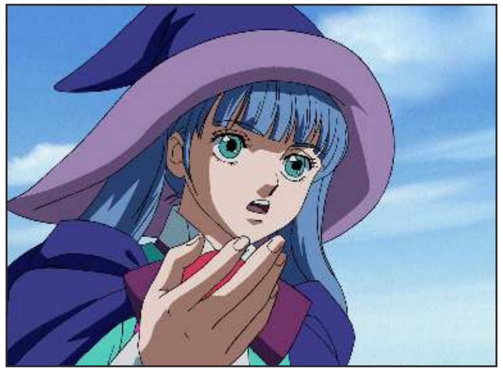
- [Color to Replace]
  Before replacement, sets the color that is to be replaced.

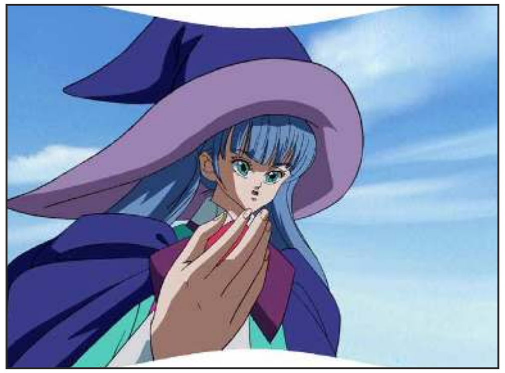
- [Replacing Color]
  Sets the color that is to be used to replace the previous color.

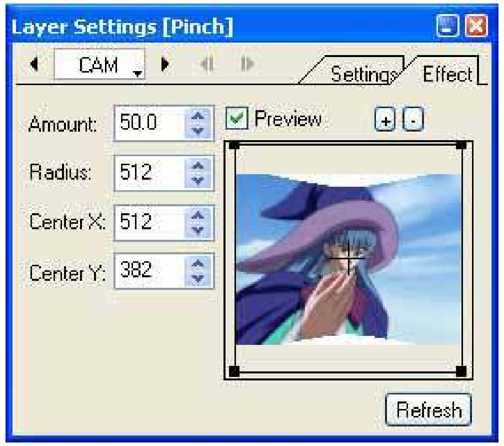
Distortion

Pinch

Applies a distortion as though part of the image has been pinched. By dragging the handles (at the apexes of the four corners of the image) shown on the preview and moving them, it is possible to set the area of the effect.






Layer Settings [Pinch]
CAM
Settings
Effect
+
-
Refresh

Amount: 50.0

Radius: 512

Center X: 512

Center Y: 382

☑ Preview

- [Amount]
  Sets the amount of the pinch effect.

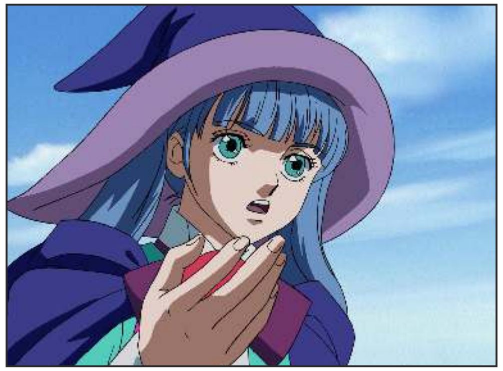
- [Radius]
  Sets the radius of the pinch effect.

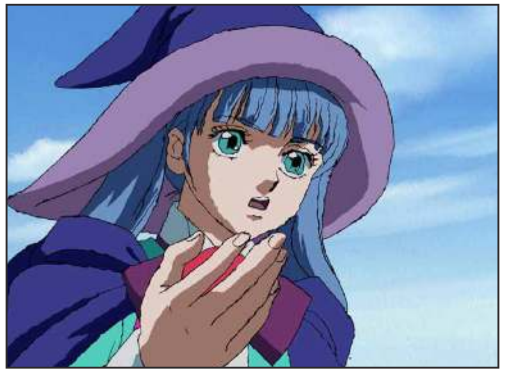
- [Center X]
  Sets the center X coordinate of the pinch effect.

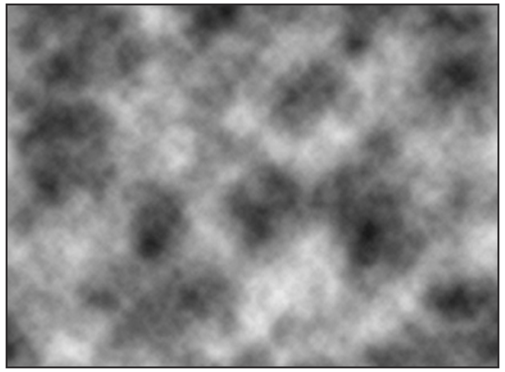
- [Center Y]
  Sets the center Y coordinate of the pinch effect.

Image distort

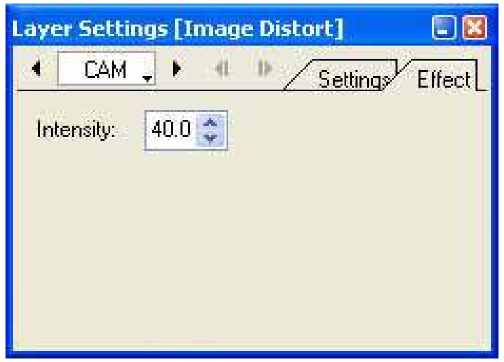
Applies distortion to an image according to the brightness of a mask image loaded in the cel bank.







[Image Distort] mask image

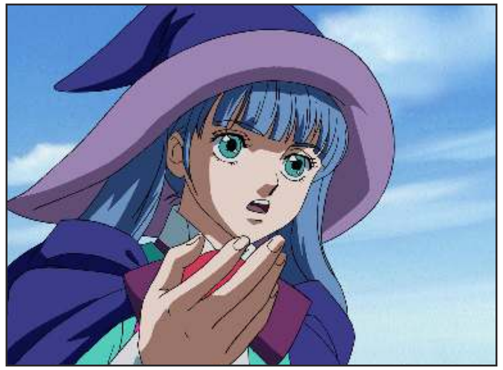

Layer Settings [Image Distort]
CAM
Settings
Effect

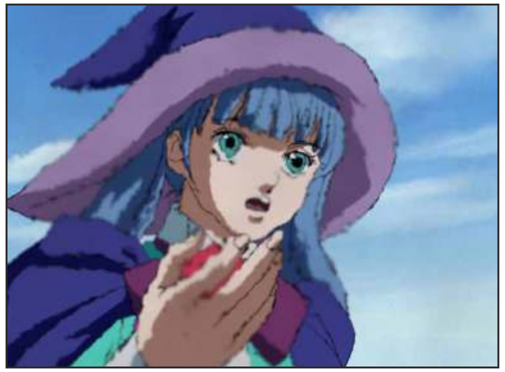
Intensity: 40.0

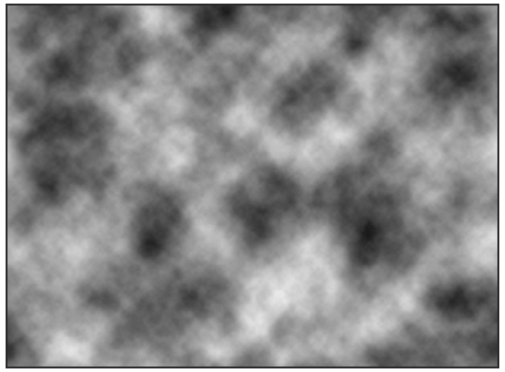
- [Intensity]
  Sets the intensity of the distortion according to the mask brightness.

Image distort 2

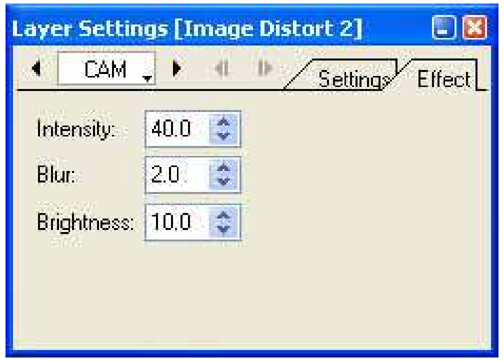
Applies distortion to an image and simultaneously changes the brightness and degree of blur according to the brightness of a mask image loaded in the cel bank.







[Image Distort] mask image



Layer Settings [Image Distort 2]

Intensity: 40.0
Blur: 2.0
Brightness: 10.0

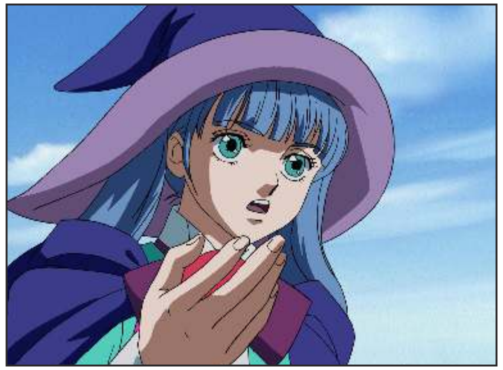
- [Intensity]
  Sets the intensity of the distortion according to the mask brightness.

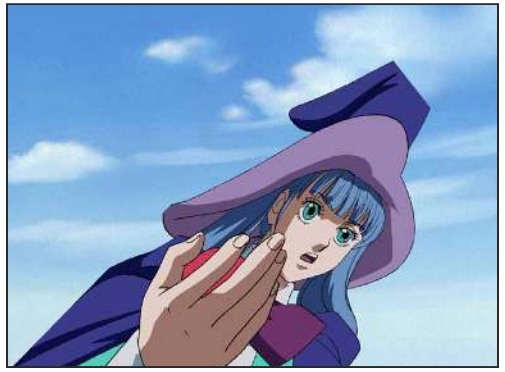
- [Blur]
  Sets the intensity of the blur according to the mask brightness.

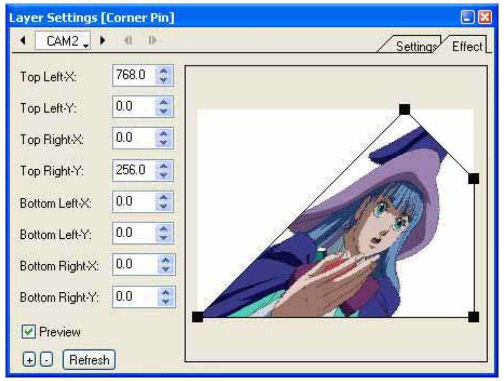
- [Brightness]
  Sets the intensity of the brightness according to the mask brightness.

Corner pin

Applies a [Corner Pin] distortion. By clicking the check box of [Preview] in the [Layer Settings] palette to set it to the "On" condition, handles (at the apexes of the four image corners) will be shown on the preview. Dragging the handles to move them will allow a corner pin distortion to be applied to the image.







Layer Settings [Corner Pin]

Top Left-X: 768.0
Top Left-Y: 0.0
Top Right-X: 0.0
Top Right-Y: 256.0
Bottom Left-X: 0.0
Bottom Left-Y: 0.0
Bottom Right-X: 0.0
Bottom Right-Y: 0.0
☑ Preview

- [Top Left-X]
  Sets the X coordinate of the top left handle.

- [Top Left-Y]
  Sets the Y coordinate of the top left handle.

- [Top Right-X]
  Sets the X coordinate of the top right handle.

- [Top Right-Y]
  Sets the Y coordinate of the top right handle.

- [Bottom Left-X]
  Sets the X coordinate of the bottom left handle.

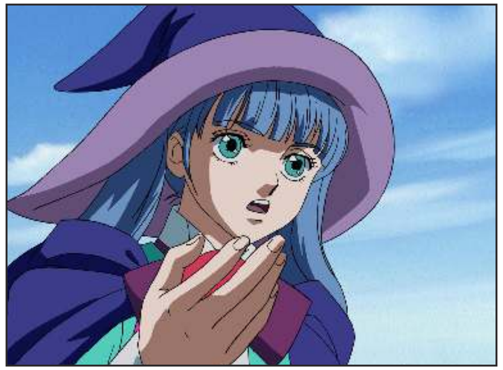
- [Bottom Left-Y]
  Sets the Y coordinate of the bottom left handle.

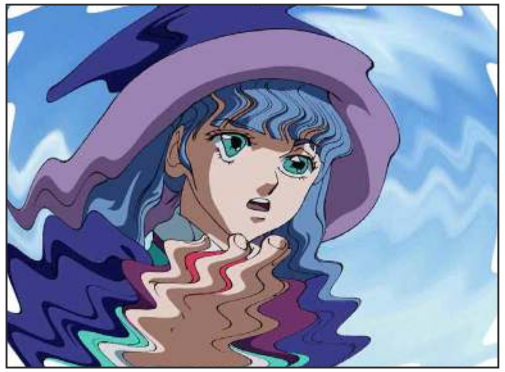
- [Bottom Right-X]
  Sets the X coordinate of the bottom right handle.

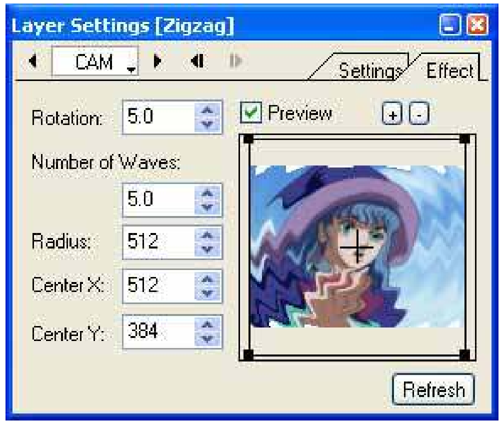
- [Bottom Right-Y]
  Sets the Y coordinate of the bottom right handle.

Zigzag

Applies a zigzag distortion to the image. By dragging on the handles (at the apexes of the four image corners) shown in the preview to move them, it will be possible to set the filter effect area.





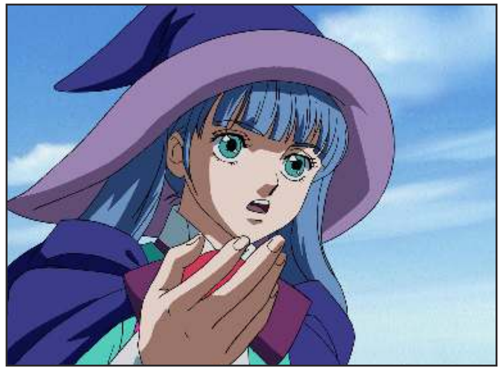


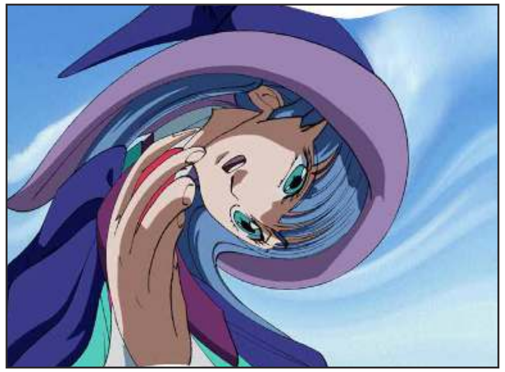
Rotation: 5.0
☑ Preview
Number of Waves: 5.0
Radius: 512
Center X: 512
Center Y: 384

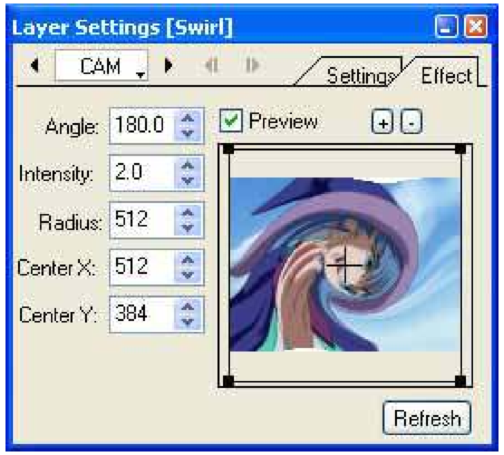
- [Rotation]
  Sets the rotation angle.
- [Number of Waves]
  Sets the number of zigzag waves.
- [Radius]
  Sets the radius of the zigzag effect.
- [Center X]
  Sets the X coordinate center of the zigzag effect.
- [Center Y]
  Sets the Y coordinate center of the zigzag effect.

Swirl

Applies a whirlpool-like deformation to the image. By clicking the check box of [Preview] in the [Layer Settings] palette to set it to the "On" condition, handles (at the apexes of the four image corners) will be shown on the preview. Dragging the handles to move them will allow setting of the filter effect area.





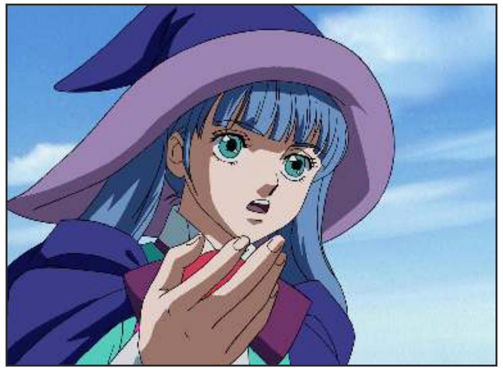


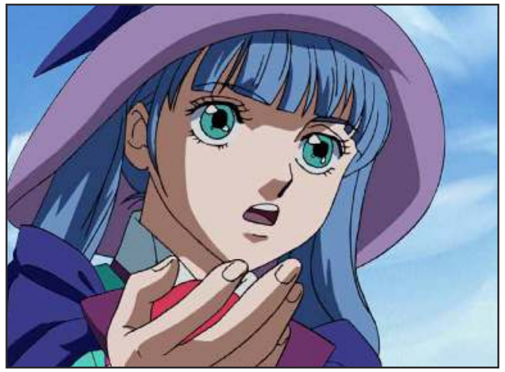
Angle: 180.0
☑ Preview
Intensity: 2.0
Radius: 512
Center X: 512
Center Y: 384

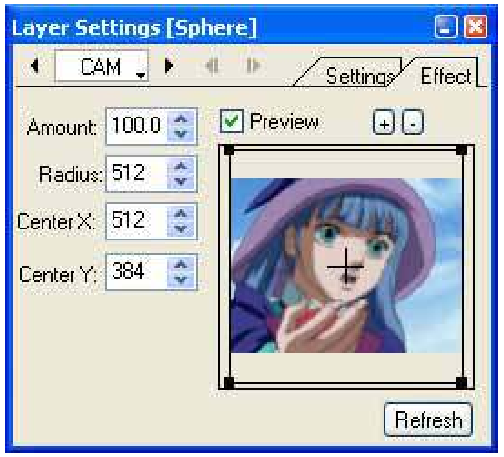
- [Angle]
  Sets the swirl rotation angle.
- [Intensity]
  Sets the swirl intensity.
- [Radius]
  Sets the swirl radius.
- [Center X]
  Sets the swirl center X coordinate.
- [Center Y]
  Sets the swirl center Y coordinate.

Sphere

Applies a distortion as seen through a sphere. By clicking the check box of [Preview] in the [Layer Settings] palette to set it to the "On" condition, handles (at the apexes of the four image corners) will be shown on the preview. Dragging the handles to move them will allow setting of the filter effect area.







Layer Settings [Sphere]

Amount: 100.0

Radius: 512

Center X: 512

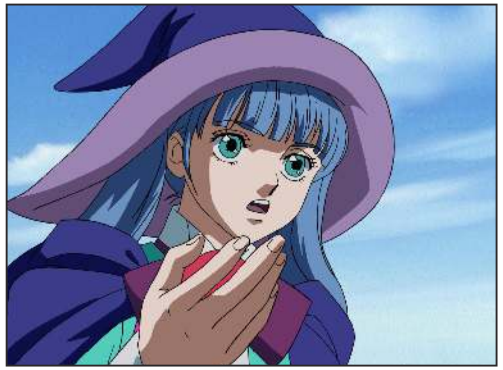
Center Y: 384

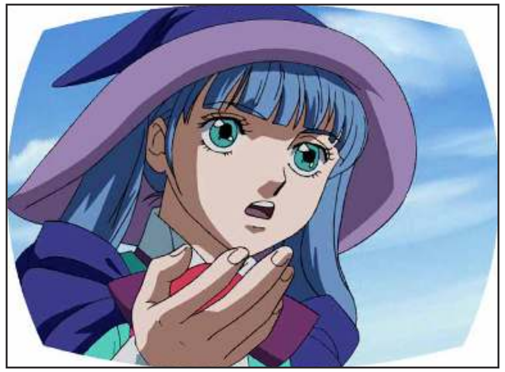
☑ Preview

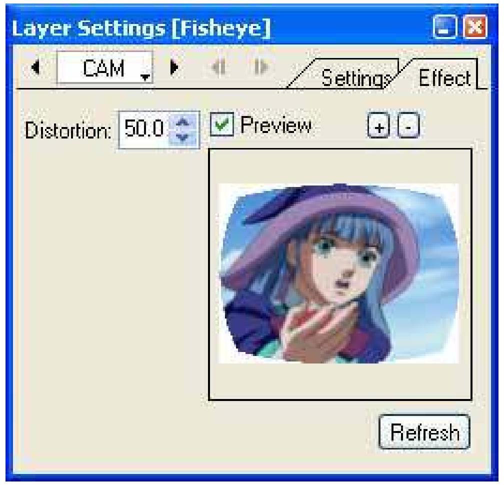
- [Amount]
  Sets the amount of the spherical effect.
- [Radius]
  Sets the radius of the spherical effect.
- [Center X]
  Sets the center X coordinate of the spherical effect.
- [Center Y]
  Sets the center Y coordinate of the spherical effect.

Fisheye

Applies a distortion as though seen through a fisheye lens.







Layer Settings [Fisheye]

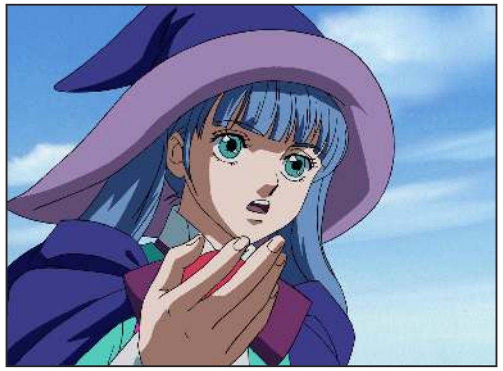
Distortion: 50.0

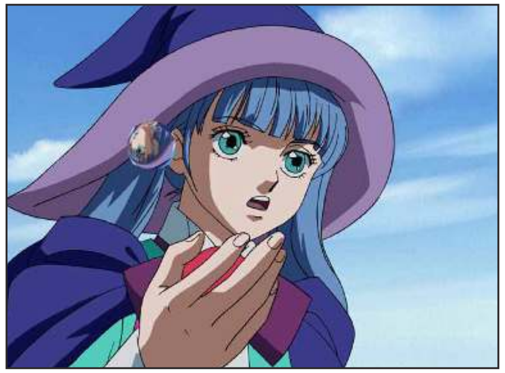
☑ Preview

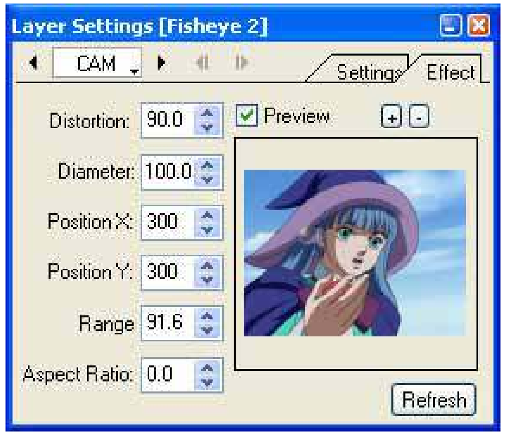
- [Distortion]
  Sets the degree of distortion of the image.

Fisheye 2

For the layer image, combines a distorted image that shows the layer image as though seen through a water drop.







Layer Settings [Fisheye 2]

Distortion: 90.0

Diameter: 100.0

Position X: 300

Position Y: 300

Range 91.6

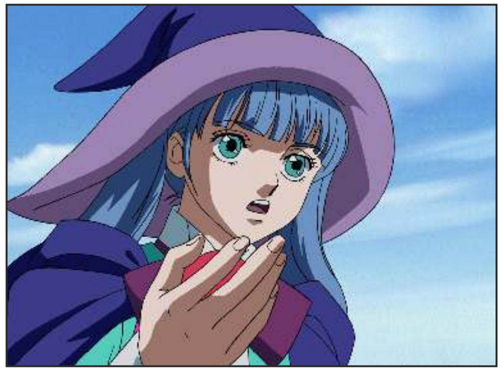
Aspect Ratio: 0.0

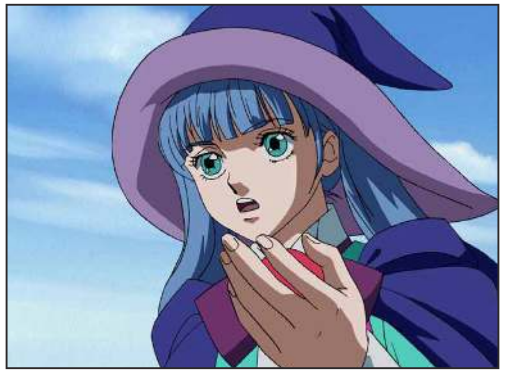
☑ Preview

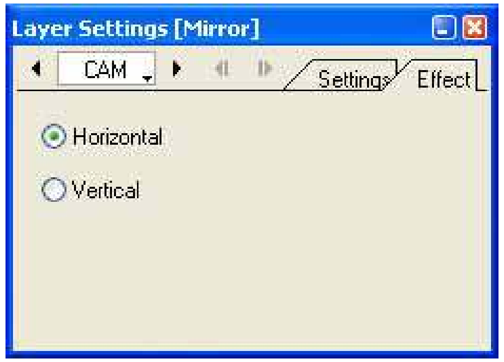
- [Distortion]
  Sets the degree of image distortion.
- [Diameter]
  Sets the diameter of the water drop.
- [Position X]
  Sets the X coordinate position of the water drop.
- [Position Y]
  Sets the Y coordinate position of the water drop.
- [Range]
  Sets the range of the image seen from the water drop. When the figure is larger, the image appears to be further away.
- [Aspect Ratio]
  Sets the aspect of the water drop. A [+] value will be longitudinal, and a [-] value will be transverse.

Mirror

Reflects the layer image in the horizontal and vertical directions.







Layer Settings [Mirror]

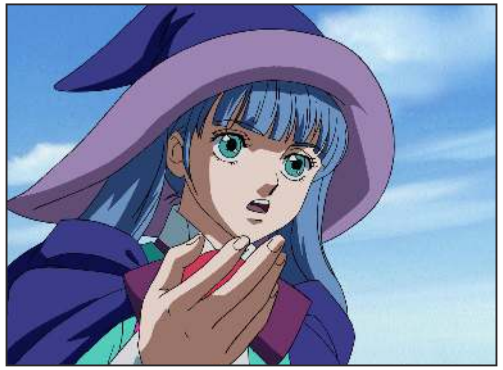
● Horizontal

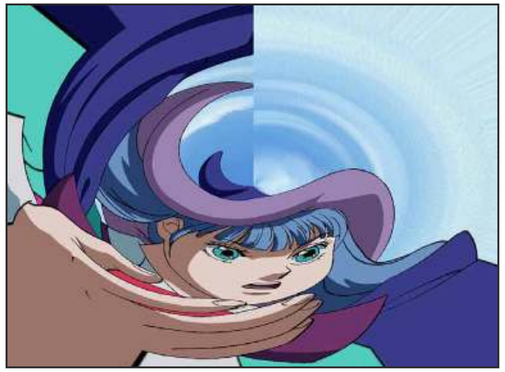
○ Vertical

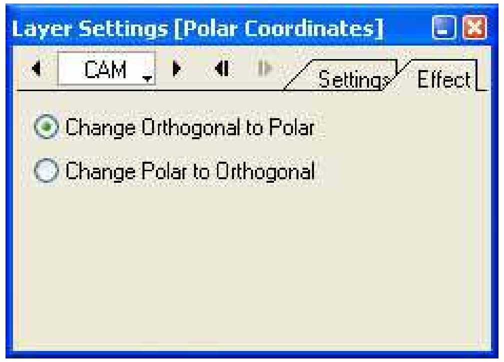
- [Horizontal]
  Reflects the layer in the horizontal direction.
- [Vertical]
  Reflects the layer in the vertical direction.

Polar coordinates

Applies a polar coordinate distortion to the image. Allows selection between [Change Orthogonal to Polar] and [Change Polar to Orthogonal].







● Change Orthogonal to Polar

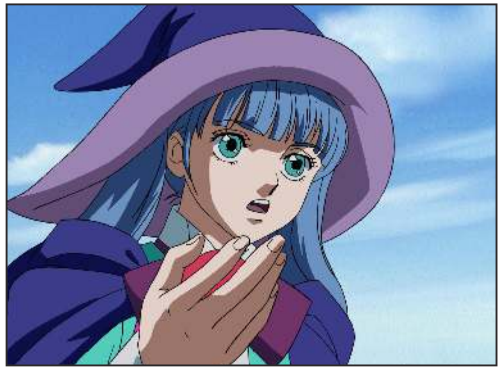
○ Change Polar to Orthogonal

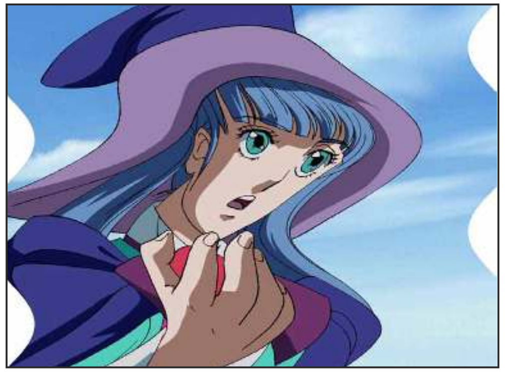
- [Change Orthogonal to Polar]
  Converts between an [Orthogonal Coordinate System] (in which all points have one coordinate) where all the coordinates are orthogonal, to a [Polar Coordinate System] (in which the origin can express a number of coordinates).

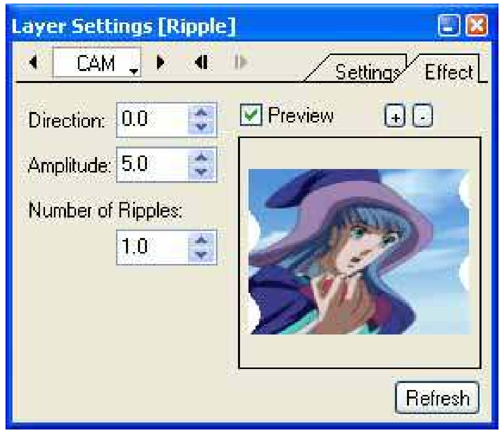
- [Change Polar to Orthogonal]
  Converts between a [Polar Coordinate System] (in which the origin can express a number of coordinates) to an [Orthogonal Coordinate System] (in which all points have one coordinate) where all coordinates are orthogonal.

Ripple

Applies a ripple distortion to the image.







Direction: 0.0

Amplitude: 5.0

Number of Ripples: 1.0

☑ Preview

- [Direction]
  Sets the ripple direction (angle).

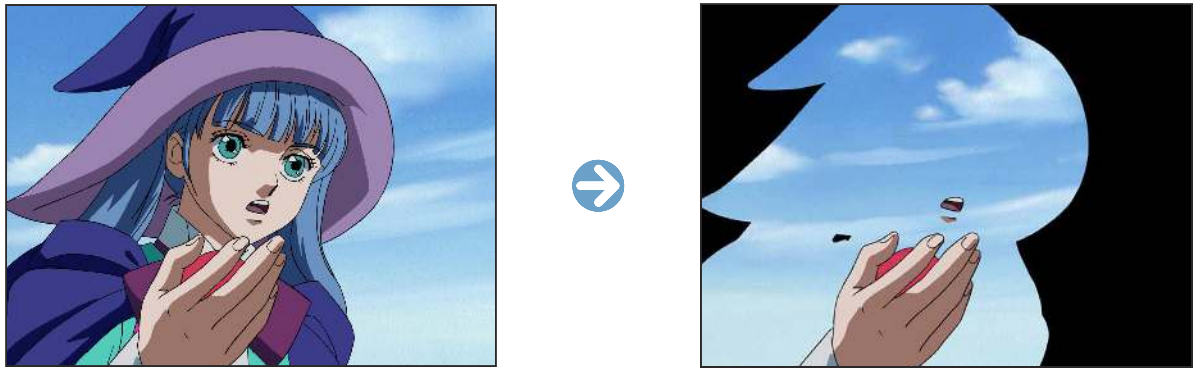
- [Amplitude]
  Sets the ripple amplitude.

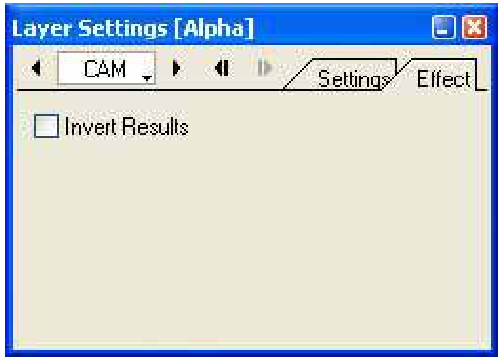
- [Number of Ripples]
  Sets the number of ripples.

Others

Alpha

Extracts the alpha channel of the layer image as a grayscale image.



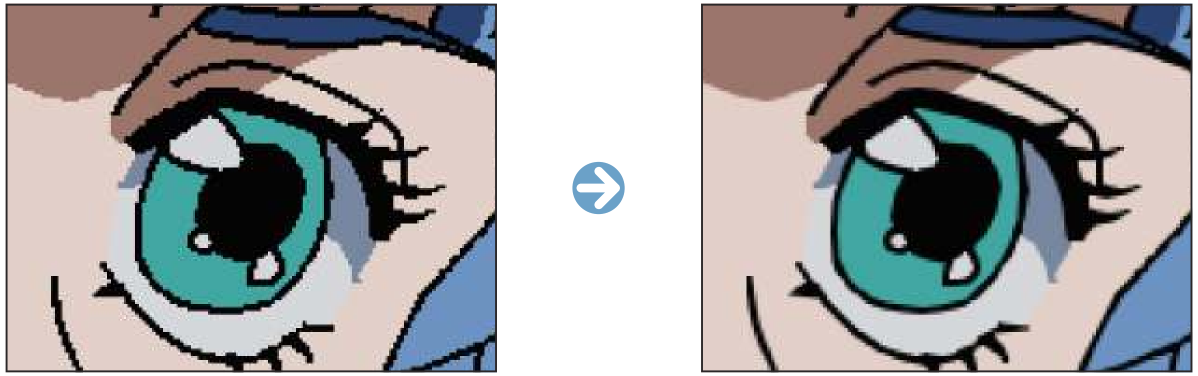

Layer Settings [Alpha]
CAM
Settings
Effect

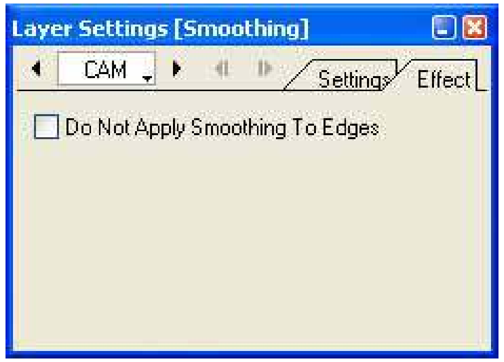
☐ Invert Results

- [Invert Results]
  Inverts the created mask image.

Smoothing

Applies antialias processing so that jagged edges of pixels in the layer image will not stand out.
This will have the same effect as setting the [Smoothing] check box in the [Settings] tab of the [Layer Settings] palette to "On".



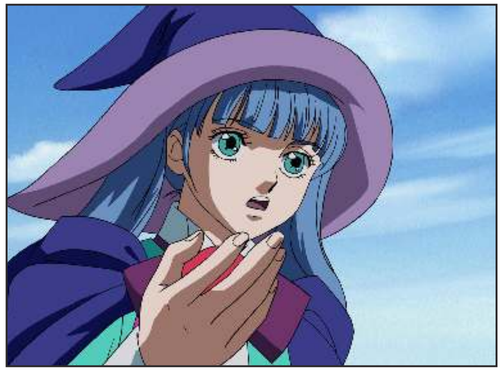

Layer Settings [Smoothing]
CAM
Settings
Effect

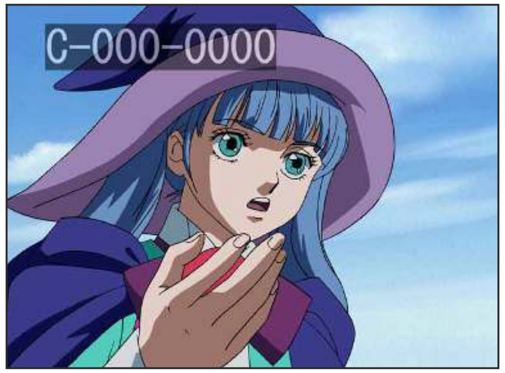
☐ Do Not Apply Smoothing To Edges

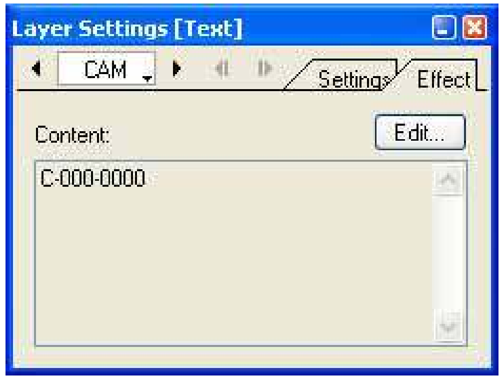
- [Do Not Apply Smoothing To Edges]
  When this check box is set to "On", smoothing will not be applied to image edges.

Text

Adds text.





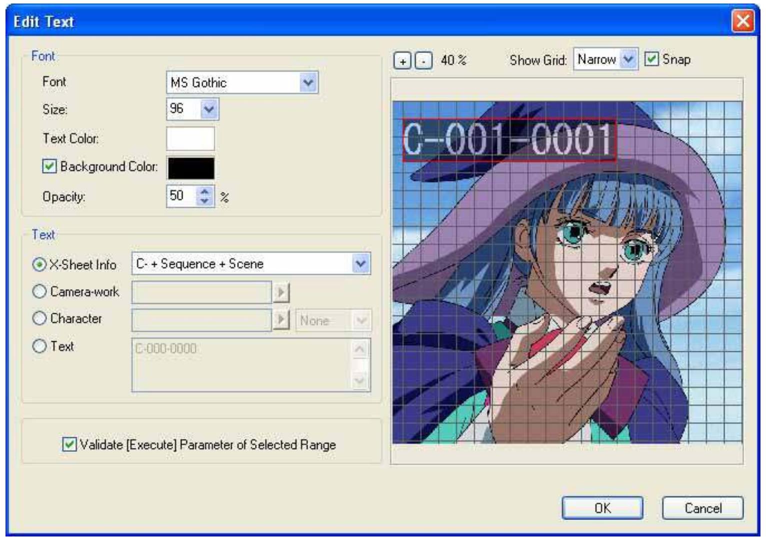


Content: C-000-0000

- [Content]
  Displays the text content.

- [Edit...]
  Clicking will show the [Text Edit] dialog box.

- [Text Edit] dialog box



Font: MS Gothic
Size: 96
☑ Background Color:
Opacity: 50 %
● X-Sheet Info: C- + Sequence + Scene
○ Camera-work
○ Character: None
○ Text: C-000-0000
☑ Validate [Execute] Parameter of Selected Range
40 %
Show Grid: Narrow
☑ Snap

[Font]
Carries out settings relating to the font.

- [Font Name]
  Sets the font type.

- [Size]
  Sets the text size.

- [Text Color]
  Sets the text color.

- [Background Color]
  By setting this to "On", a background will appear for the text, and it will be possible to set the background color.

- [Opacity]
  Sets the opacity of the text and background.

[Text]
Sets the types of text contents.

- [X-sheet Info]
  Automatically shows X-sheet information such as the title, episode, sequence number, and scene number as text information.

- [Camera-work]
  Shows the specification of the camera work. Frequently used words can be selected from the menu.

- [Character]
  Shows the character name. It is also possible to load character names.

- [Text]
  Shows general text.

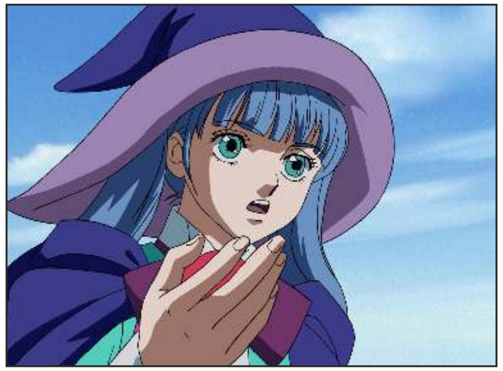
- [Validate [Execute] Parameter of Selected Range]
  When this is set to "On", if a selection has been made in the [Text Layer] on the X-sheet, the [Apply] parameter of the selected area will be set to valid (=1).

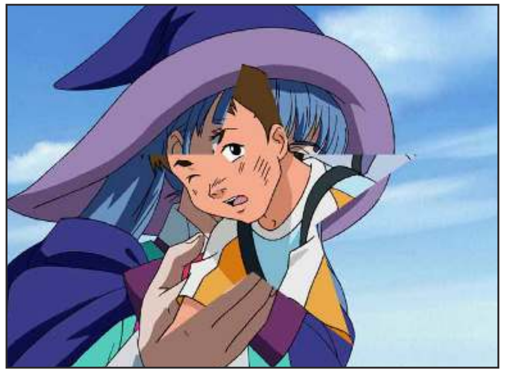
- [Show Grid]
  Shows grid lines in the preview.

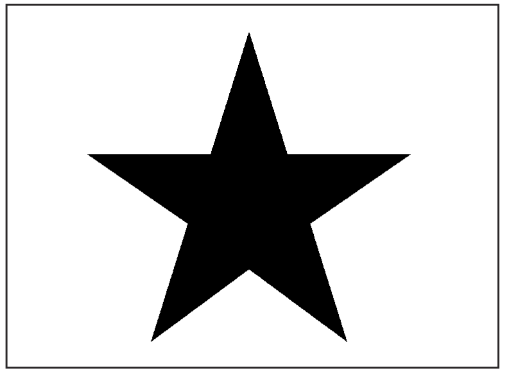
- [Snap]
  When arranging text, if this check box is in the "On" condition, the text will snap to the grid shown in the preview.

Mask replace

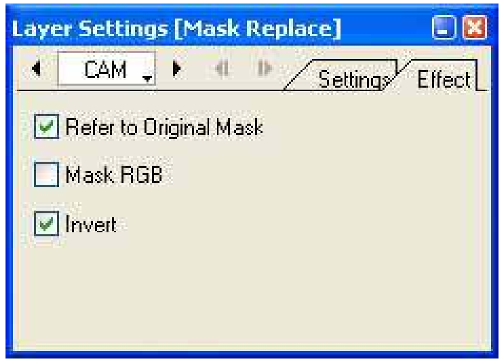
Implements mask compositing according to the brightness of a different mask image from the original alpha channel of the cel.







[Mask Replace] mask image



Layer Settings [Mask Replace]

☑ Refer to Original Mask

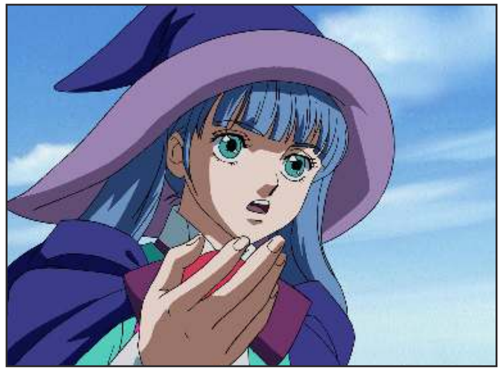
☐ Mask RGB

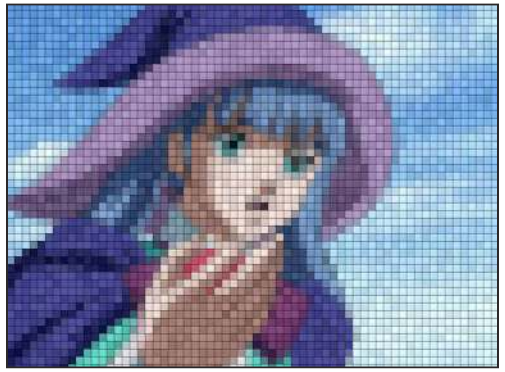
☑ Invert

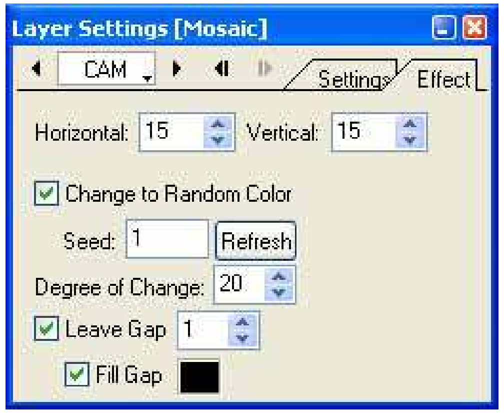
- [Refer to Original Mask]
  Implement compositing with reference to the alpha channel of the image loaded in the cel layer.
- [Mask RGB]
  Sets condition of using the RGB plane of the mask image as the mask for the affiliated cel layer.
- [Invert]
  Inverts the masked part of the affiliated cel layer.

Mosaic

Applies a mosaic processing effect.







Layer Settings [Mosaic]

Horizontal: 15 Vertical: 15

☑ Change to Random Color

Seed: 1

Degree of Change: 20

☑ Leave Gap 1

☑ Fill Gap ■

- [Horizontal]
  Sets the fineness of the mosaic (in the horizontal direction). (Units: Pixels))
- [Vertical]
  Sets the fineness of the mosaic (in the vertical direction). (Units: Pixels)
- [Change to Random Color]
  Sets whether or not the pixel color will be randomly changed.
- [Seed]
  Sets the "Seed" value when the color is to be randomly changed. Clicking the [Refresh] button will create a new color condition each time. By noting the displayed seed value, it will be possible to generate the same color conditions again by inputting the [Seed] value.
- [Degree of Change]
  Sets the degree of color change in the [Change to Random Color] condition.
- [Leave Gap]
  Opens up a gap between each of the mosaic pixels.
- [Fill Gap]
  When the check box is set to "On", and when there is a gap between the mosaic pixels, this fills the gap. It is possible to select an optional color as the fill color.

Step: 03

Back lighting

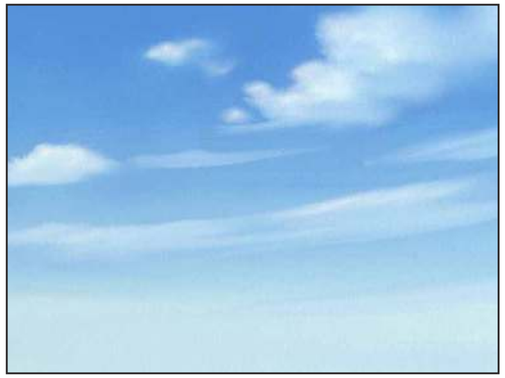
In this step, an explanation is given about backlighting.

In CoreRETAS HD, it is possible to express backlighting by using the [Backlight] or [Backlight 2] filters together with the backlighting mask image (grayscale).

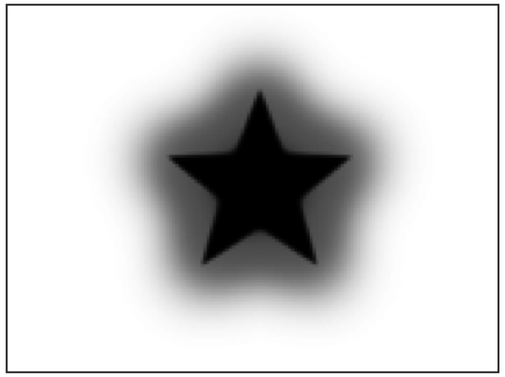
Method of using [Backlight] filter

1. Loading materials images in the cel bank

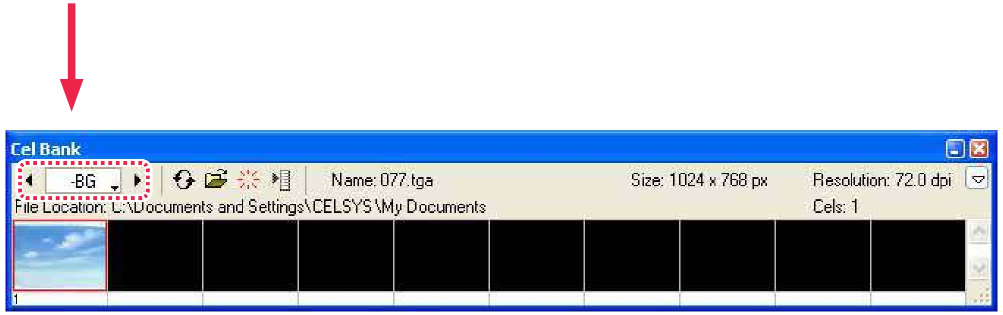
Open the X-sheet, and load the materials images in the cel banks [-BG] and [A].



Load background in [-BG]



Load mask image in [A]



Cel Bank

-BG

Name: 077.tga

Size: 1024 x 768 px

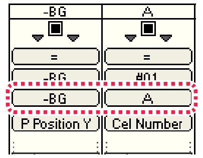
Resolution: 72.0 dpi

File Location: C:\Documents and Settings\CELSYS\My Documents

Cels: 1

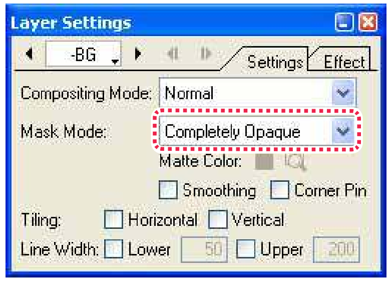
2. Confirming the links between the layers and cel banks

Confirm that the layer [-BG] and the cel bank [-BG], and the layer [A] and cel bank [A] are each linked.



3.Confirming the compositing mode and mask mode

Using the layer settings palette, make the following settings:



Layer Settings

-BG

Compositing Mode: Normal

Mask Mode: Completely Opaque

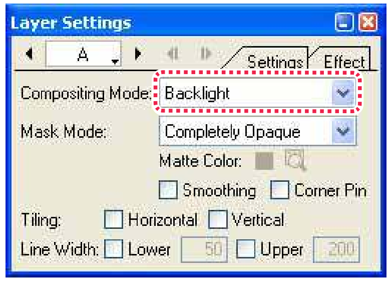
Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

[-BG: Completely Opaque]



Layer Settings

A

Compositing Mode: Backlight

Mask Mode: Completely Opaque

Matte Color:

☐ Smoothing ☐ Corner Pin

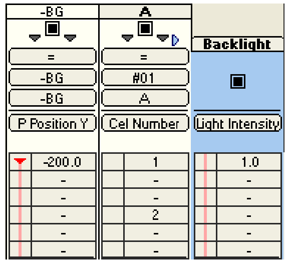
Tiling: ☐ Horizontal ☐ Vertical

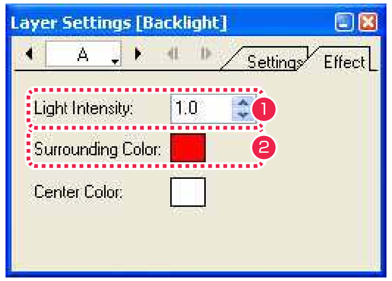
Line Width: ☐ Lower 50 ☐ Upper 200

[A: Backlight Compositing]

4. Adding the [Backlight] filter

Add the [Backlight] filter to cel layer [A].





Layer Settings [Backlight]

A

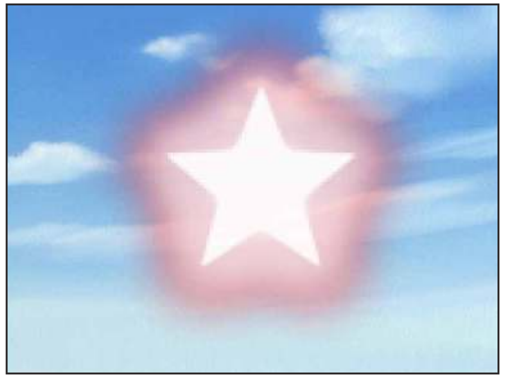
Light Intensity: 1.0 ❶

Surrounding Color: 🟥 ❷

Center Color: ☐

❶ Input an optional value (Ex.: [1.0]) to the [Light Intensity] parameter in [Backlight].

❷ Set the [Surrounding Color] and [Center Color].



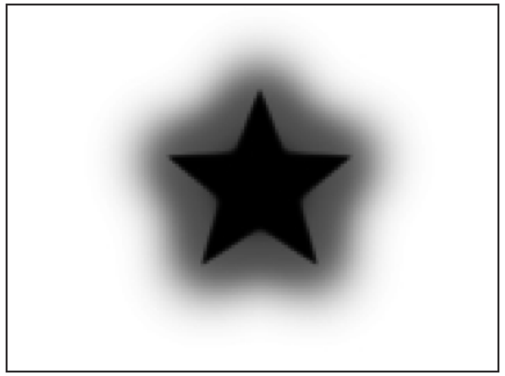
The [Center Color] is the light source color, while the [Surrounding Color] is the color of the light shining out to the surroundings.
In the example, the [Center Color] is set to [White (RGB=255, 255, 255)], and the [Surrounding Color] is set to [Red (RGB=255, 0, 0)].

In addition, when compositing layers that have been loaded as backlighting materials, different compositing results can be obtained by using compositing modes other than the [Backlight Compositing] mode, for example by using [Add] or [Screen] compositing.

Backlight images and each parameter

The backlighting mask is normally expressed as a 0-255 grayscale image.
Black (RGB=0, 0, 0) parts of the image use the [Center Color] set in the [Backlight] or [Backlight 2] filter, while the color of the parts where the light shines into the surroundings is set by the [Surrounding Color].
When white (RGB=255, 255, 255) is used, color will not be shown, regardless of how strongly the backlighting parameters are set.
When the [Light Intensity] parameter in [Backlight] is set to 0, there will be no light in the backlight. When the parameter value is increased, the [Center Color] part will become stronger, followed by the [Surrounding Color] a little later. When the parameters are further strengthened, the [Center Color] part will begin to spread into the [Surrounding Color].

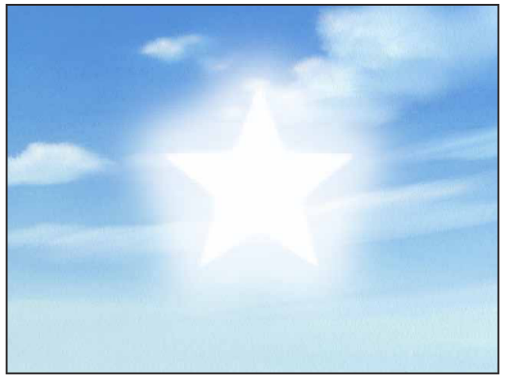
For mask images used as [Backlight] filters, it will be necessary for the surroundings of the mask to be blurred in order to specify the area in which the light is scattered.

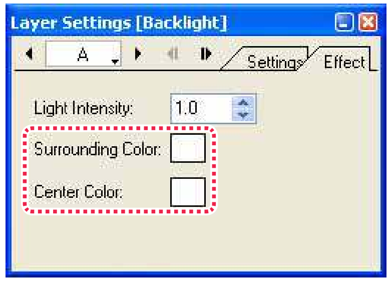


[Figure: Mask]

For example, apply backlight processing to the above image (mask).
The compositing mode utilizes [Backlight] Compositing.

First, set both the [Surrounding Color] and [Center Color] to white.

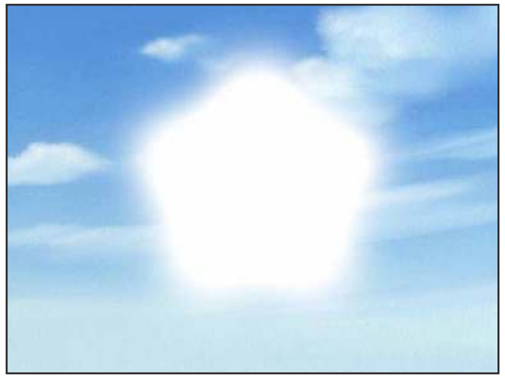


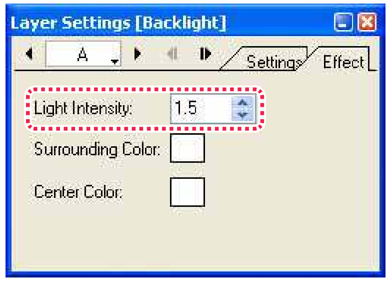


Layer Settings [Backlight]

Light Intensity: 1.0
Surrounding Color: ☐
Center Color: ☐

Further strengthening the parameter will result in the whole area being filled with the [Center Color].

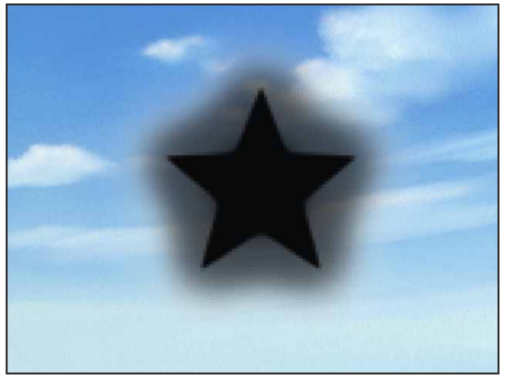


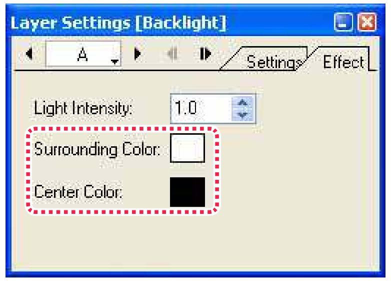


Layer Settings [Backlight]

Light Intensity: 1.5
Surrounding Color: ☐
Center Color: ☐

When the [Center Color] is set to black, and the [Surrounding Color] is set to white, it will appear as follows.

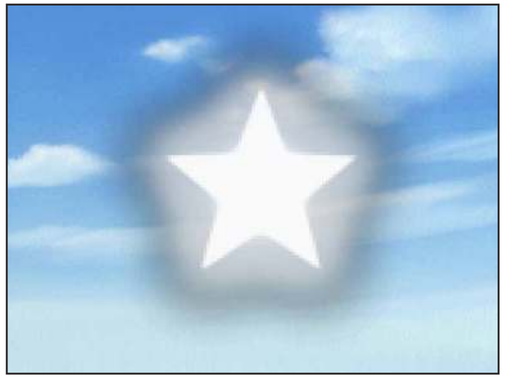


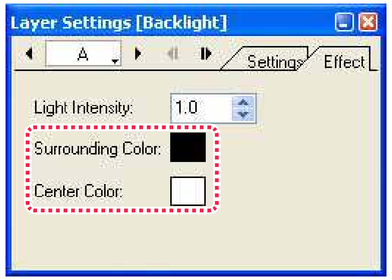


Layer Settings [Backlight]

Light Intensity: 1.0
Surrounding Color: ☐
Center Color: ■

Conversely, if black is loaded to the [Surrounding Color], and white to the [Center Color], the effect will appear as follows.





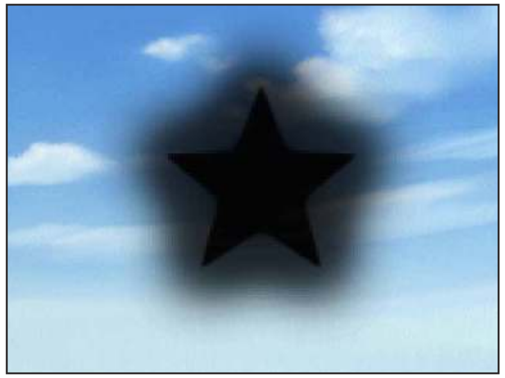
Layer Settings [Backlight]

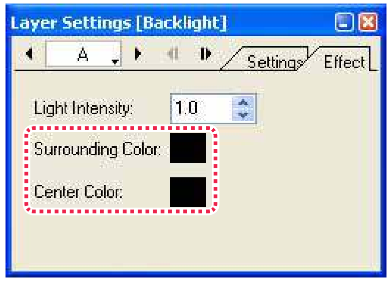
Light Intensity: 1.0

Surrounding Color: ■

Center Color: □

And setting all the light settings to black will show the following.





Layer Settings [Backlight]

Light Intensity: 1.0

Surrounding Color: ■

Center Color: ■

As shown in this example, it is also possible to set dark colors as the backlighting colors. By expertly operating the parameters through having an understanding of the mechanism for generating light, it will be possible not only to [Make Objects Shine], but also to express the [Spread of Darkness].

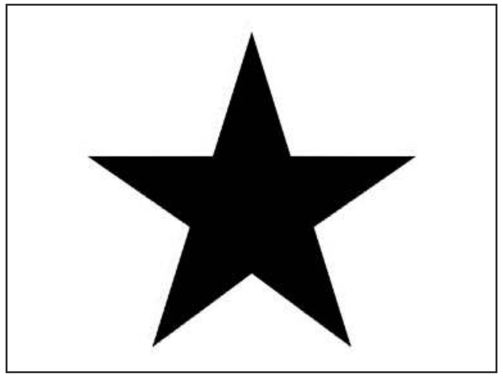
POINT

When using dark lighting

When using dark lighting, set the compositing mode to [Backlighting] Compositing. In principle, it is not possible to express dark lighting using [Add] Compositing or [Screen] Compositing.

Backlight 2

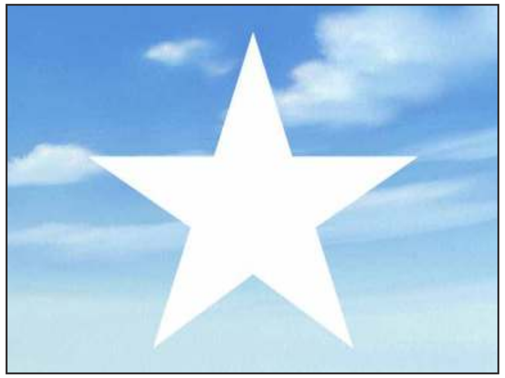
The mask image used in the [Backlight] filter requires a blur to be applied to the mask surroundings in order to specify the range over which the light is scattered. However, in the [Backlight 2] filter the range of the light spread can be controlled using the [Spread] parameter, and so the prior application of blur to the mask will not be required.

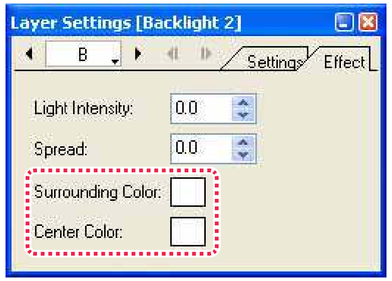


[Figure: Mask]

For example, apply backlight processing to the above image (mask).
The compositing mode utilizes [Backlight] Compositing.

First, set both the [Surrounding Color] and [Center Color] to white.





Layer Settings [Backlight 2]

B

Settings Effect

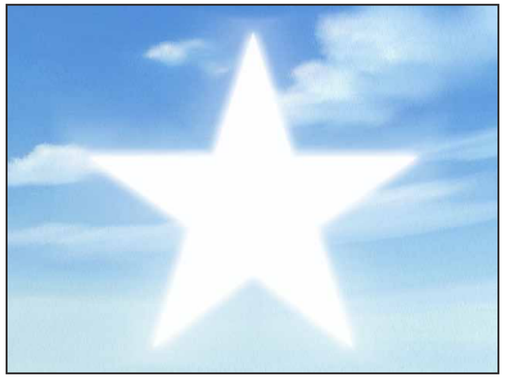
Light Intensity: 0.0

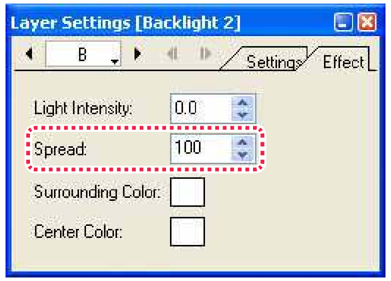
Spread: 0.0

Surrounding Color:

Center Color:

Further strengthening the [Spread] parameter will cause the light to spread outside the mask, becoming expressed as the [Surrounding Color].





Layer Settings [Backlight 2]

B

Settings Effect

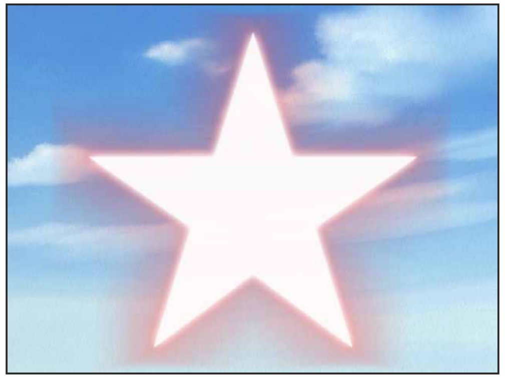
Light Intensity: 0.0

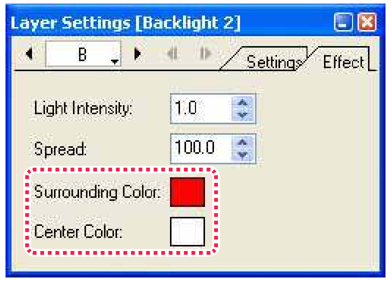
Spread: 100

Surrounding Color:

Center Color:

When red is loaded to the [Surrounding Color], and white is loaded to the [Center Color], it will appear as follows.





Layer Settings [Backlight 2]

B

Settings Effect

Light Intensity: 1.0

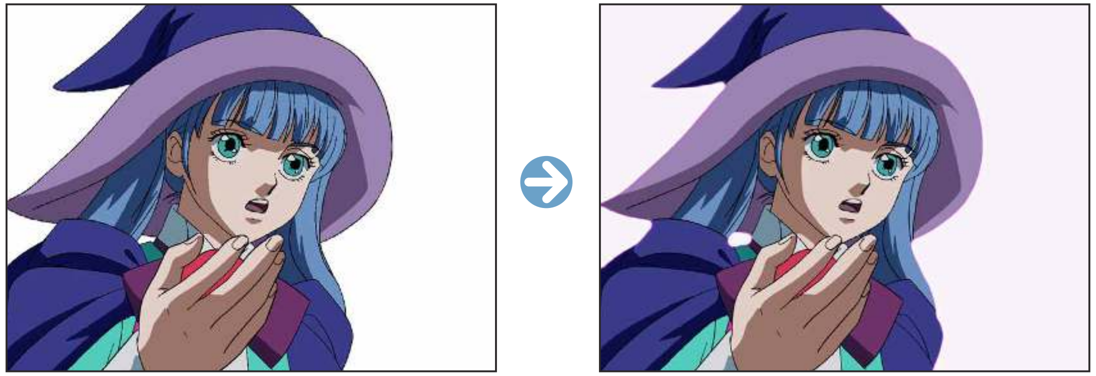
Spread: 100.0

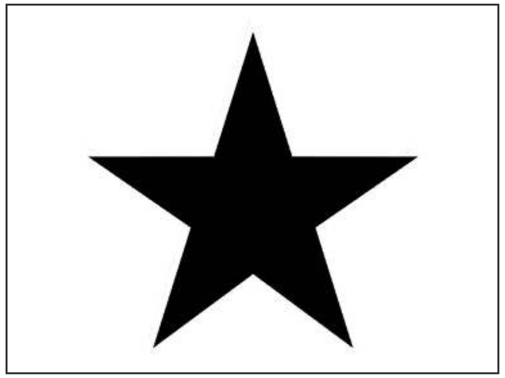
Surrounding Color: 🟥

Center Color:

BG light

The backlight expressed in CoreRETAS HD differs from the [Backlighting] in film shooting, since the layer that is overlaid on top of the backlight layer will not be affected by the backlighting.
For example, when the background is to be processed with overall backlighting, even if the CoreRETAS HD [Background Layer] has backlighting applied, the background will appear like a normal image since the light will not shine through the cel that is layered on top (the cel in the foreground will not allow light to pass through).
In this situation, the [BG Light] should be loaded to carry out this type of processing.

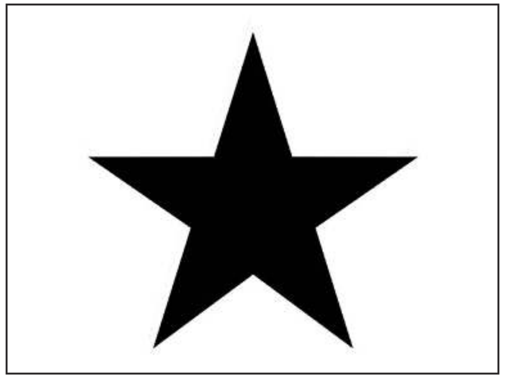


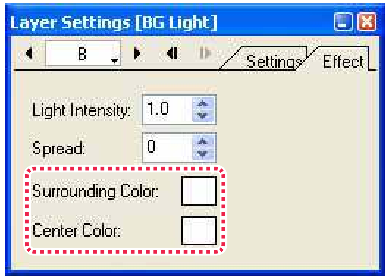


[Figure: Mask]

For example, apply background light processing to the above image.
The compositing mode utilizes [Backlight] Compositing.

First, set both the [Surrounding Color] and [Center Color] to white.





Layer Settings [BG Light]

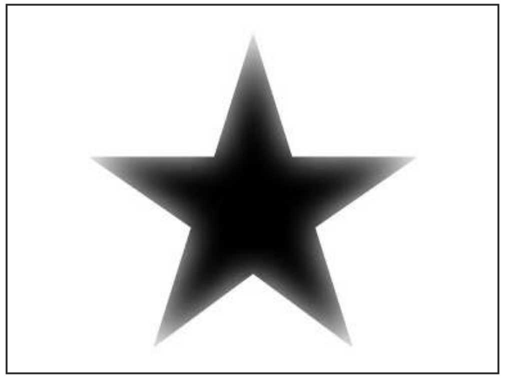
Light Intensity: 1.0

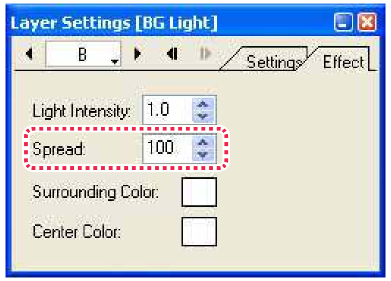
Spread: 0

Surrounding Color: □

Center Color: □

Further strengthening the [Spread] parameter will cause the light to spread inside the mask, becoming expressed as the [Surrounding Color].





Layer Settings [BG Light]

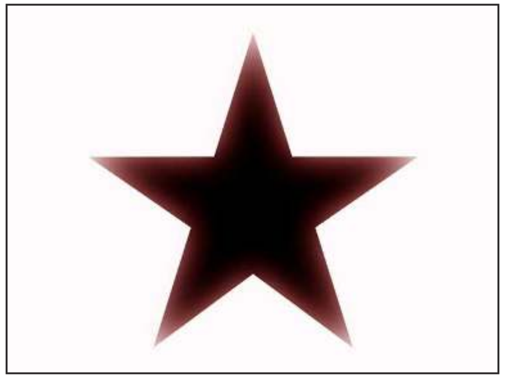
Light Intensity: 1.0

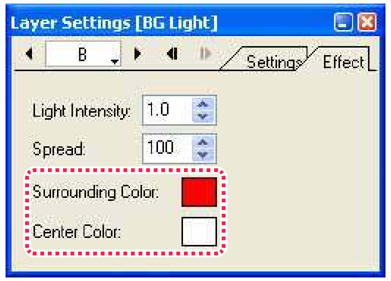
Spread: 100

Surrounding Color: □

Center Color: □

When red is loaded to the [Surrounding Color], and white is loaded to the [Center Color], it will appear as follows.





Layer Settings [BG Light]

Light Intensity: 1.0

Spread: 100

Surrounding Color: 🟥

Center Color: □

Step: 04 Focus

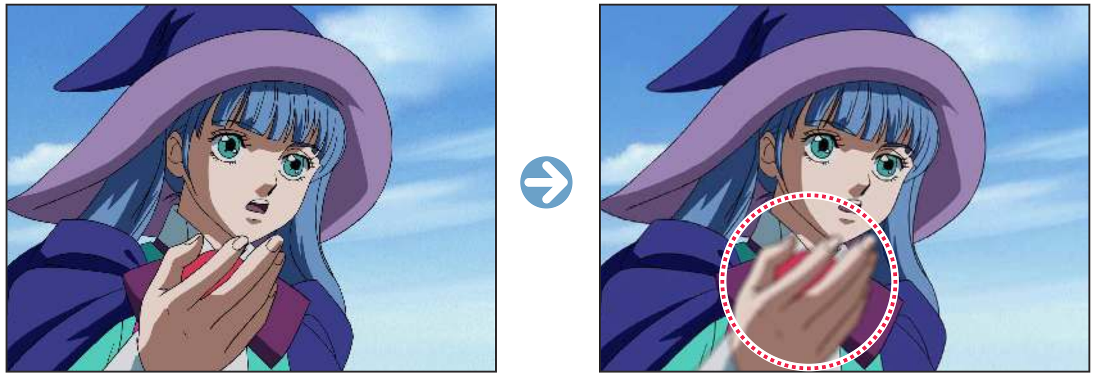
In this step, an explanation is given about focus.

Cel focus and camera focus

In CoreRETAS HD, an out-of-focus effect can be expressed by applying blur processing.
In the principle of the focus processing, there are two types, [Cel Focus] and [Camera Focus].

1. Cel focus

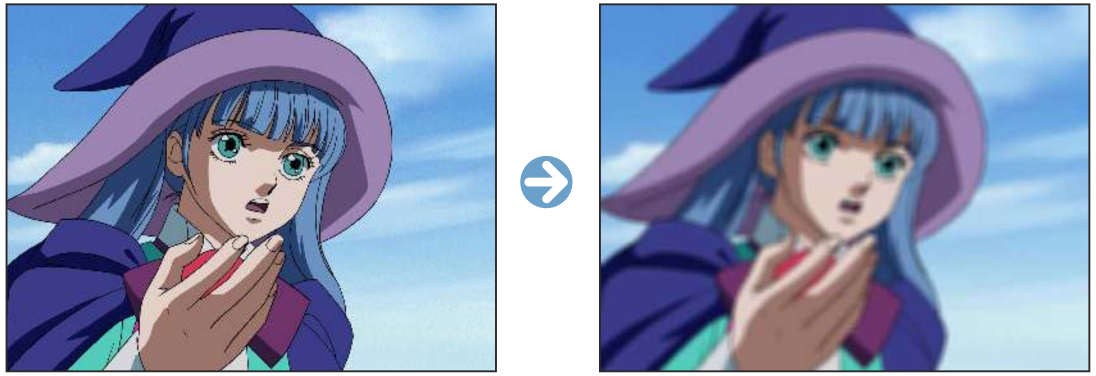
In [Cel Focus], a [Focus Filter] is set separately for each of the cel layers, and it is possible to set different degrees of focus for each layer. This allows a feeling of depth similar to that realized using a multi-plane camera to be simply achieved.



[Figure: Setting focusing in each layer]

2. Camera focus

When conducting blur processing in the cel layers, focus (blur) processing is carried out internally at the stage before the layers are composited, and then compositing is carried out. In [Camera Focus], focus processing is implemented on the composited result of all the cel layers.



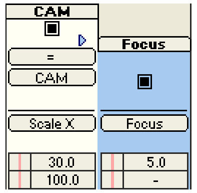
[Figure: Setting focusing for the camera]

Out-of-focus effect

Because the out-of-focus effect is expressed using image blur, it will be influenced by the scale of the layer.

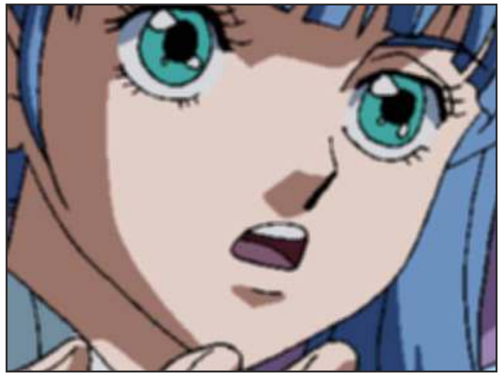
Relationship with the scale value

Since the out-of-focus processing is carried out before the scale conversion, during scale conversion the image out-of-focus effect may disappear or become emphasized.

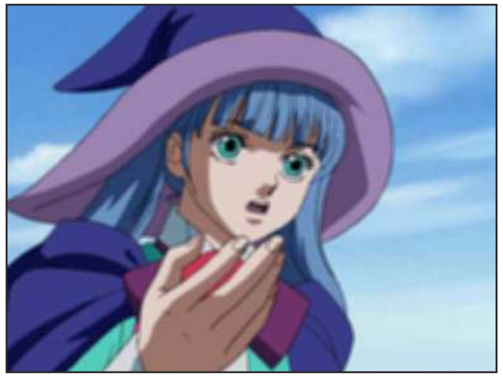


Scale X 30.0
100.0

Focus 5.0
-



[Focus Value = 5.0, Scale = 30]



[Focus Value = 5.0, Scale = 100]

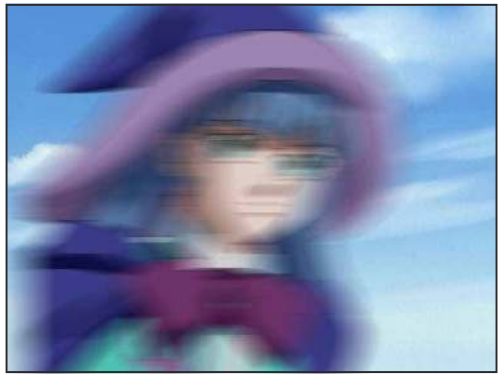
As seen from the above, when the scale is made smaller, the out-of-focus effect will appear smaller even when the out-of-focus value is the same. Accordingly, if the same out-of-focus effect is to be applied, it may be necessary to change the focus value according to the scale value.

Step: 05 Motion blur effects

In this step, an explanation is given about the motion blur effect.

About the motion blur effect

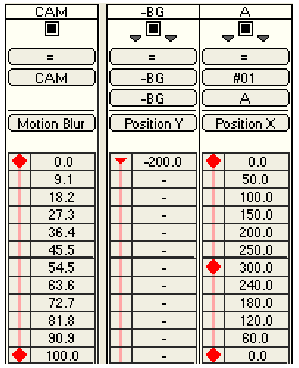
By quickly panning a camera such as when capturing an image of a car passing by at high speed, the background of the resulting image on video or film will appear to be blurred. The degree of blurring becomes larger for faster speeds. This phenomenon occurs because the objects move greatly during the exposure period so that it is not possible to capture a clear image. [Motion Blur] recreates this kind of blur due to motion.



Applying the motion blur effect

The [Motion Blur] parameters are set for the camera layer or for each of the cel layers. When setting motion blur in the camera layer, this setting will be prioritized and motion blur will be applied to all the layers.

The intensity (blur width) of the motion blur will be determined by the [Motion Blur] parameter (between 0 and 100) of the X-sheet, and the size of the movement between the frames or the change in enlargement and rotation.

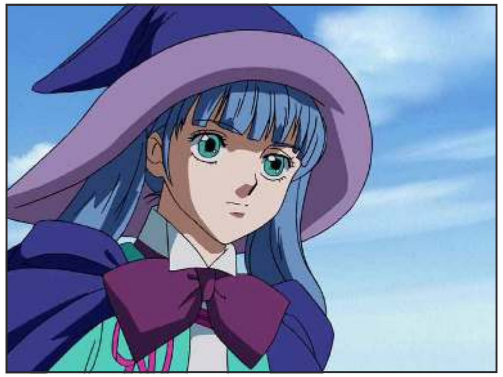


CAM	-BG	A
=	=	=
CAM	-BG	#01
	-BG	A
Motion Blur	Position Y	Position X
◆ 0.0	▼ -200.0	◆ 0.0
9.1	-	50.0
18.2	-	100.0
27.3	-	150.0
36.4	-	200.0
45.5	-	250.0
54.5	-	◆ 300.0
63.6	-	240.0
72.7	-	180.0
81.8	-	120.0
90.9	-	60.0
◆ 100.0	-	◆ 0.0

[Figure: Example in which motion blur is applied to the [CAM] layer to match the large movement amount of the [A] cel.]

Point requiring caution when using motion blur

The [Motion Blur] function generates blur in proportion to the amount of movement from the preceding frame of the camera or image. Accordingly, when there is no movement of the camera or image (in a FIX scene), the motion blur effect will not appear, however strongly the parameters are set.



[Figure: Applying motion blur to a fixed scene]
(The [Motion Blur] effect does not appear)

Step: 06

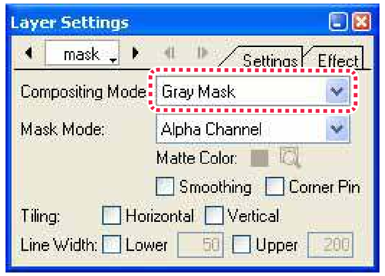
Compositing mask processing

In this step, an explanation is given about compositing mask processing.

Using the cel layer set by the [Gray Mask] or [Alpha Mask] compositing modes as the boundary, compositing mask processing determines whether to show the image above the layer or the image below the layer.

Gray mask

In [Gray Mask], it is possible to use 24 bit or 32 bit full color images as the mask image (More precisely, 24 bit or 32 bit images that have had their RGB planes converted to grayscale are used as the mask images).
Even if images with alpha channels are used, the alpha channel parts will be ignored.



Layer Settings

mask | Settings | Effect

Compositing Mode: Gray Mask

Mask Mode: Alpha Channel

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

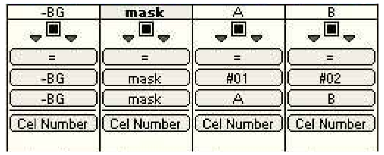
In the mask image, black (RGB=0, 0, 0) pixels will show the layers below the layer set in [Gray Mask]. In this case, the [Lower Layer] means the image that shows the result of compositing all the layers positioned below the layer set in [Gray Mask].

In the mask image, white (RGB=255, 255, 255) pixels will show the composited result of the layer above the layer set in [Gray Mask]. The [Upper Layer] differs from the [Lower Layer] in that it indicates only the one layer immediately above the layer set in [Gray Mask].

The mask transparency will depend on the pixel brightness of the grayscale part of the mask image.

Example

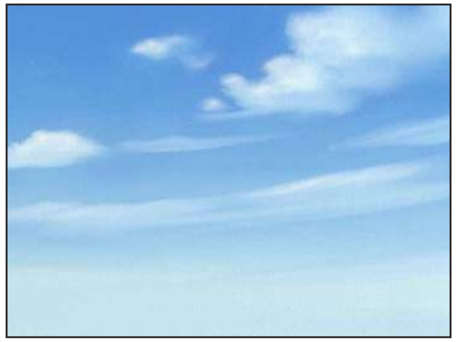
When each layer is arranged in the order shown below, and [Gray Mask] has been set as the compositing mode of the [Mask] layer.



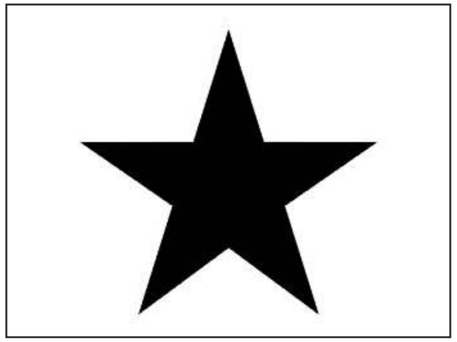
-BG	**mask**	A	B
=	=	=	=
-BG	mask	#01	#02
-BG	mask	A	B
Cel Number	Cel Number	Cel Number	Cel Number

[Figure: Arrangement of layers]

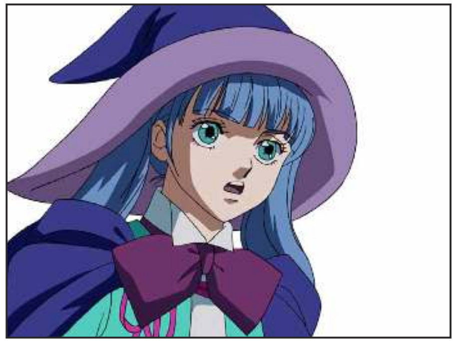
The images in each layer are as shown on the next page.



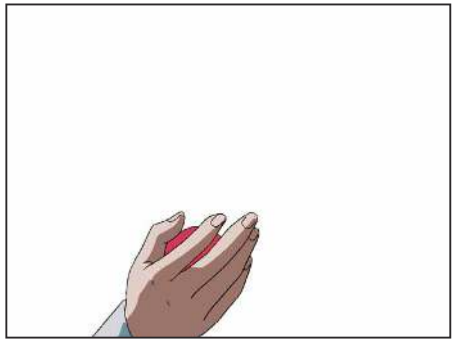
[Figure: BG layer]



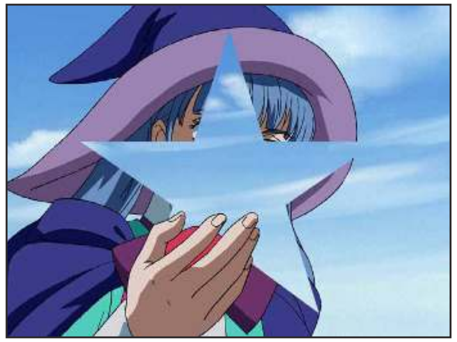
[Figure: Mask image (RGB plane)]



[Figure: A layer]



[Figure: B layer]

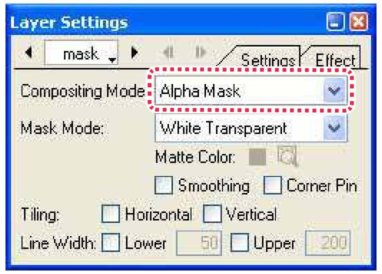


[Mask compositing result (Gray Mask)]

Only the one layer, layer [A], that is positioned immediately above the [Mask] layer set by [Gray Mask] will be affected, and the [BG] layer image will be composited.

Alpha mask

In [Alpha Mask], it is possible to use 32 bit full color images as the mask image.
[Alpha Mask] uses the alpha channel parts of images for carrying out mask processing. Accordingly, images contained in the RGB planes will not be used in mask processing. All other functions are the same as in [Gray Mask].



Layer Settings

mask — Settings — Effect

Compositing Mode: Alpha Mask

Mask Mode: White Transparent

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☐ Horizontal ☐ Vertical

Line Width: ☐ Lower 50 ☐ Upper 200

Although it will also be possible to use 24 bit full color images as the mask image, in this case an alpha channel should be generated from the 24 bit image following the [Mask Mode], and the generated alpha channel should be used in the processing.

In the mask image (alpha channel), black pixels will show the layers below the layer set in [Alpha Mask]. In this case, the [Lower Layer] means the image that shows the result of compositing all the layers positioned below the layer set in [Alpha Mask].

In the mask image (alpha channel), white pixels will show the 100% composited result of the layer above the layer set in [Alpha Mask]. The [Upper Layer] differs from the [Lower Layer] in that it indicates only the one layer immediately above the layer set in [Alpha Mask].

The grayscale part of the mask image (alpha channel) will change the transparency of the mask above depending on the pixel brightness.

Step: 07

Mask replacement

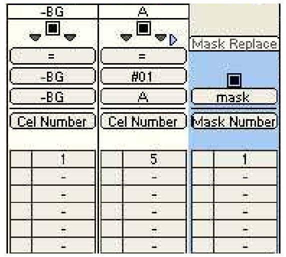
In this step, an explanation is given about mask replacement.

[Mask Replacement] filter

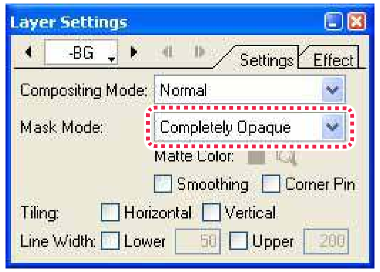
[Mask Replacement] is a filter that implements the mask mode on images loaded in the cel layer using a different mask image from the original alpha channel of the cel.

Sample X-sheet

Adding a [Mask Replacement] filter to the [A] layer.



-BG	A	Mask Replace
=	=	
-BG	#01	
-BG	A	mask
Cel Number	Cel Number	Mask Number
1	5	1
-	-	-
-	-	-
-	-	-
-	-	-
-	-	-



Layer Settings

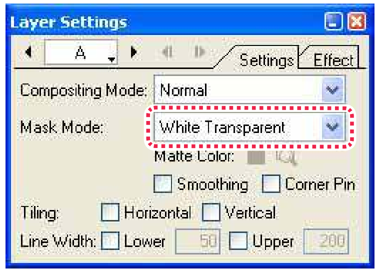
-BG

Compositing Mode: Normal

Mask Mode: Completely Opaque

Settings
Effect
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

The [-BG] layer [Mask Mode] is set to [Completely Opaque].



Layer Settings

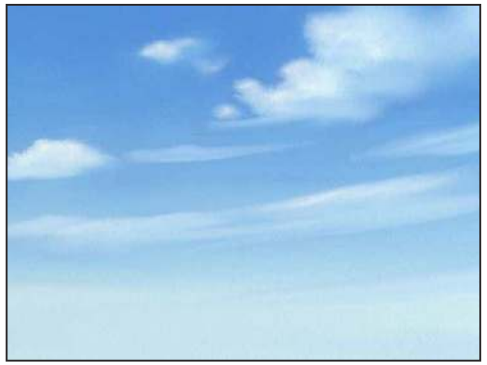
A

Compositing Mode: Normal

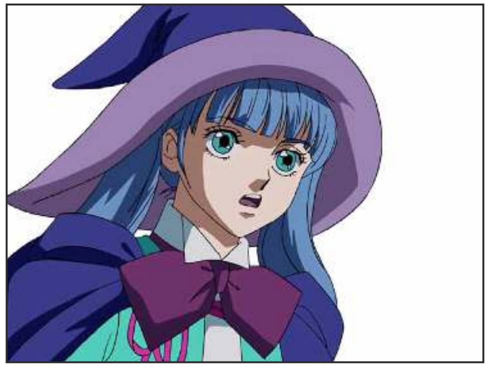
Mask Mode: White Transparent

Settings
Effect
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

The [A] layer [Mask Mode] is set to [White Transparent].

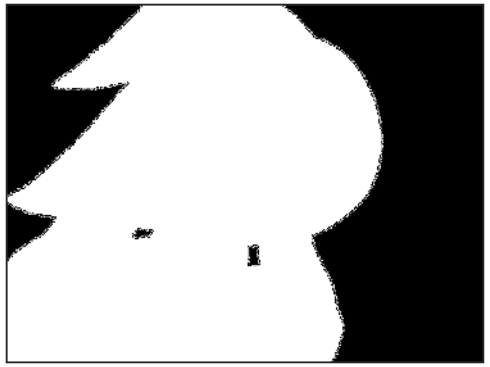


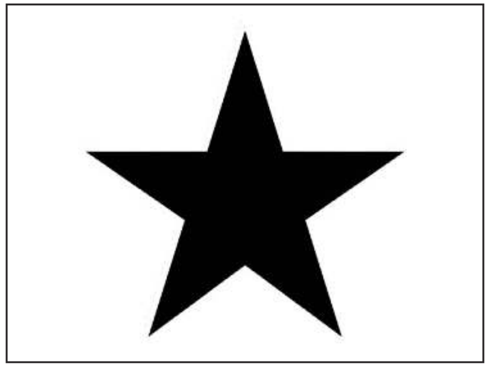
Material: Cel bank [-BG]



Material: Cel bank [A]

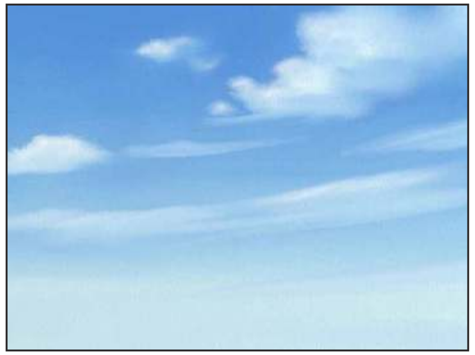
The original alpha channel of the image loaded in cel bank [A] is as shown below.

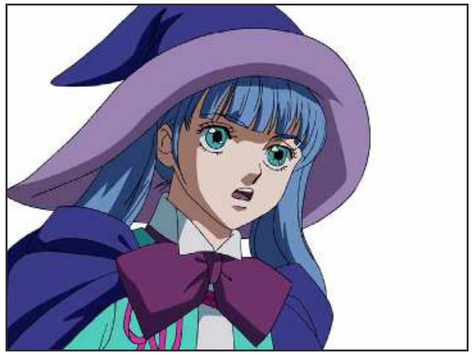


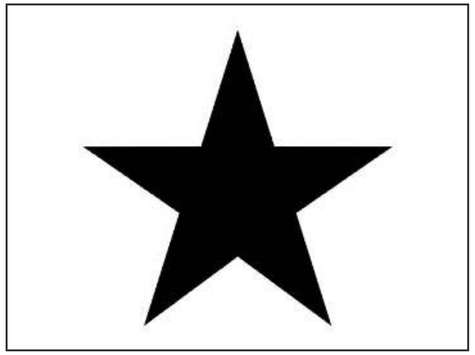


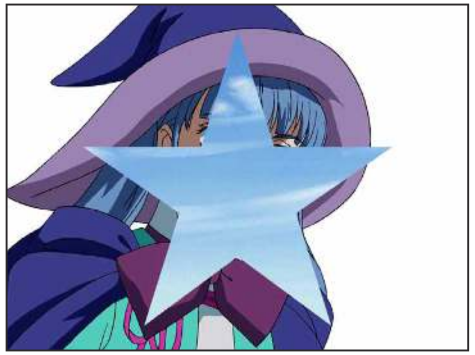
Material: Cel bank [MASK] (24bit)

Ex.1: Refer to original mask: Off
Use RGB plane as mask: On
Invert mask: Off

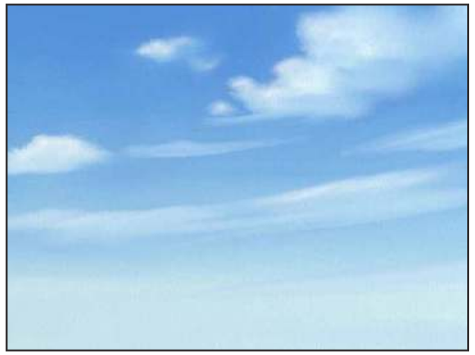

[-BG]

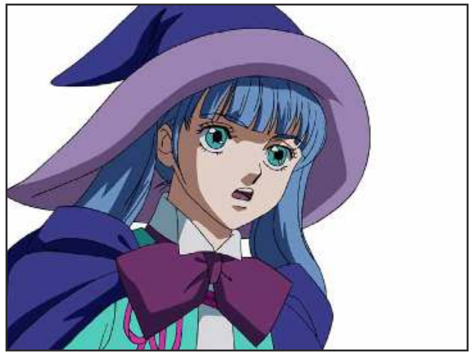

[A] cel

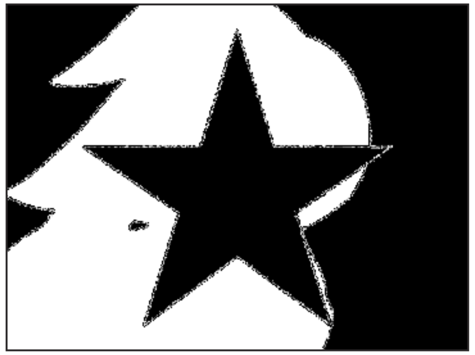

Alpha channel that will be applied to cel [A] due to the mask replace filter.

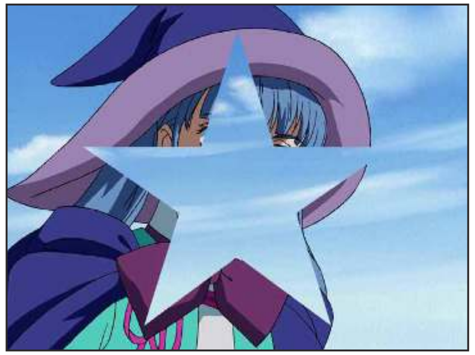

Compositing result

Ex.2: Refer to original mask: On
Use RGB plane as mask: On
Invert mask: Off

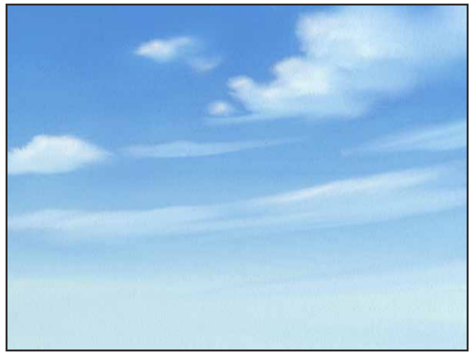

[-BG]


[A] cel

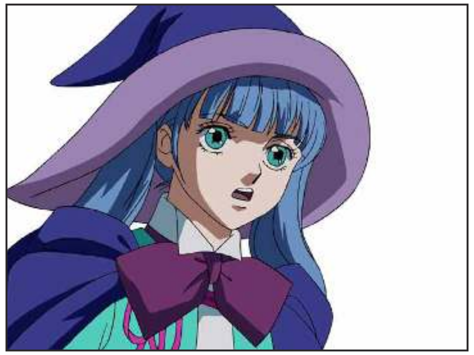

Alpha channel that will be applied to cel [A] due to the mask replace filter.


Compositing result

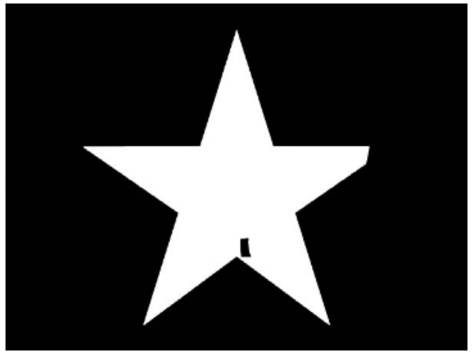
Ex.3: Refer to original mask: On
Use RGB plane as mask: On
Invert mask: On



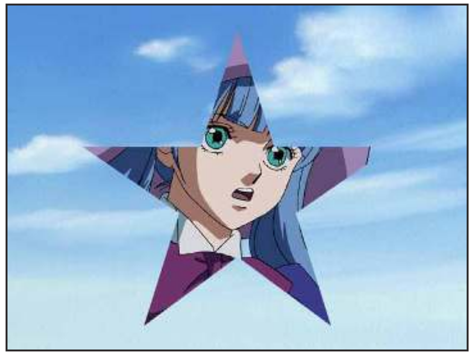
[-BG]



[A] cel



Alpha channel that will be applied to cel [A] due to the mask replace filter.



Compositing result

Step: 08

Corner pin

In this step, an explanation is given about the corner pin.

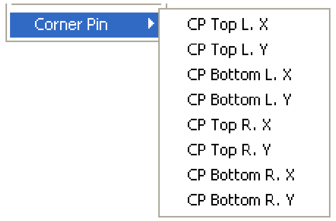
[Corner Pin] is a function that distorts an image by moving the image's four corners.

[Corner Pin] can be implemented either by making specifications in the [Settings] tab and carrying out operations in the [Stage] window, or through operations using the [Effects] tab.

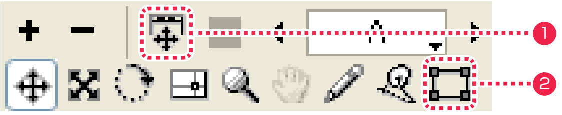
Corner pin operation using the stage window

It will be possible to implement [Corner Pin] distortion in each layer.

If [Corner Pin] in the [Layer Settings] palette is set to "On", it will be possible to newly use the 8 types of parameters in the X-sheet, from [CP Top Left X] to [CP Bottom Right Y], to control the coordinates and implement the corner pin deformation.



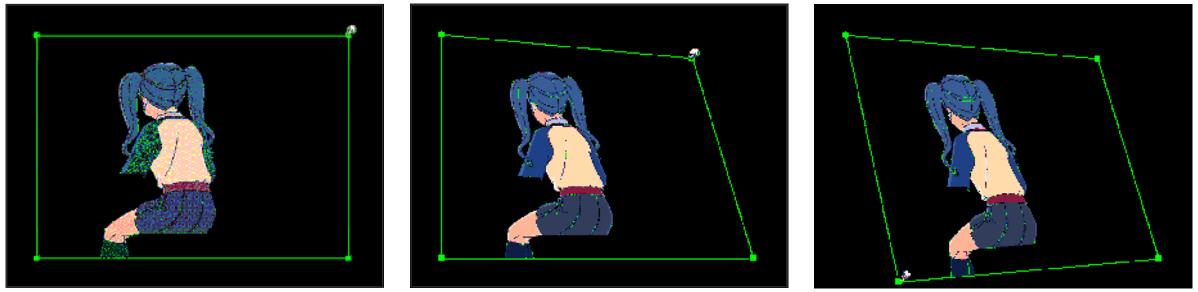
By setting [Corner Pin] in the [Layer Settings] palette to "On", and switching the [Pegbar Edit/Layer Edit] button to [Layer Edit], it will be possible to use the [Corner Pin] tool in the [Stage] window.



① [Pegbar Edit/ Layer Edit] button

② [Corner Pin] tool

Select the [Stage] window [Corner Pin] tool and drag the handles at the four corners of the layer to distort the layer.

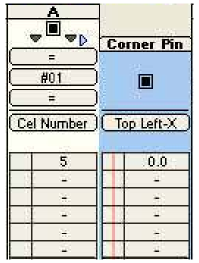


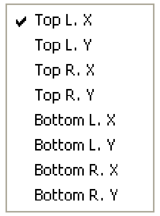
The [Corner Pin] operation in the [Stage] window is only possible to be applier to layers, and there is a restriction that prevents the [Corner Pin] distorting of [Pegbars]. However, the distortion operation can be carried out in the wide [Stage] window.

Corner pin operation using the effect

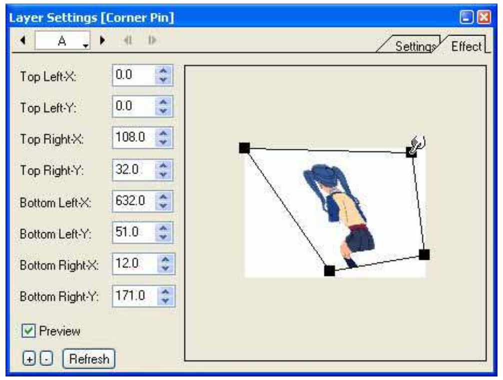
By using [Multi-Camera], it will be possible to implement [Corner Pin] distortion over several layers at the same time.

For the layers in which the corner pin distortion is to be applied, add and use the [Corner Pin] (or [Corner Pin V5]) plug-ins from the [Effects] menu.
An effects layer will appear to the right side of the applicable layer in the X-sheet, and it will be possible to newly use the 8 types of parameters, from [Top Left X] to [Bottom Right Y] to control the coordinates and implement the corner pin distortion.





In the [Effects] tab of the [Layer Settings] palette, in addition to numerical input, it will also be possible to drag the handles at the four corners of the layer to deform the layer.



Layer Settings [Corner Pin]

Top Left-X: 0.0
Top Left-Y: 0.0
Top Right-X: 108.0
Top Right-Y: 32.0
Bottom Left-X: 632.0
Bottom Left-Y: 51.0
Bottom Right-X: 12.0
Bottom Right-Y: 171.0
☑ Preview

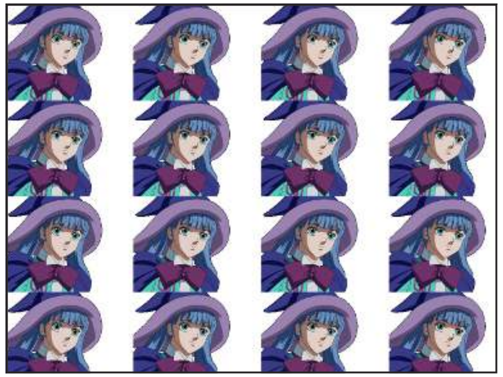
The effects [Corner Pin] operation differs from the [Stage] window [Corner Pin] operation in that it will be possible to apply the [Corner Pin] deformation to a number of layers at the same time in combination with [Multi-Camera] and [Nesting]. However, because the deformation operation is carried out in the small preview area in the [Layer Settings] palette, the operability is slightly reduced.

For more details of the Effects corner pin, see [Chapter 5 Application Description: Special Effects and Camera Effects].

Step: 09 Tiling

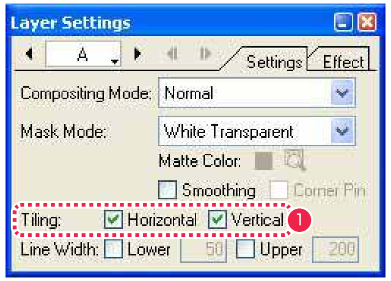
In this step, an explanation is given about tiling.

It is possible to repeat an image infinitely [Horizontally] in the X-axis (horizontal) direction, or [Vertically] in the Y-axis (vertical) direction.



When using tiling as a flowing background, it will be possible to slide the image without concern about the background size, which will be convenient. Take care that if processing to delete the linking edges is not carried out, these edges will be noticeable in the repeated parts. If the [Corner Pin] check box is set to "On", it will not be possible to use [Tiling].

* When using tiling, vector format images (CEL format) will be converted to raster format images.



Layer Settings

A

Settings | Effect

Compositing Mode: Normal

Mask Mode: White Transparent

Matte Color:

☐ Smoothing ☐ Corner Pin

Tiling: ☑ Horizontal ☑ Vertical ①

Line Width: ☐ Lower 50 ☐ Upper 200

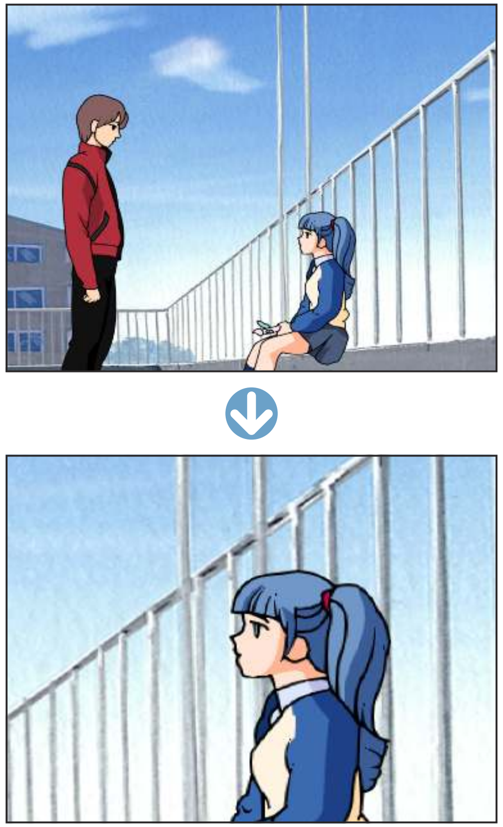
① The [Vertical] and [Horizontal] check boxes of [Tiling] in the [Layer Settings] palette should be set to "On".

Step: 10 Line width control

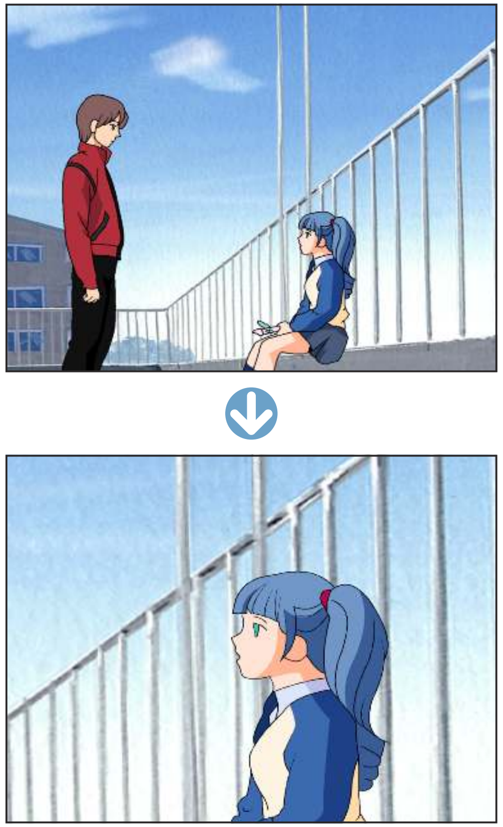
In this step, an explanation is given about line width control.

When a vector (CEL) image is loaded into a layer, by using [Layer Settings] palette, it will be possible to control the line width during Zoom In and Zoom Out.

Because the widths of lines in raster format images will change according to the scale following enlargements and reductions, the lines will appear to be thick when the enlargement rate is large.



Enlarged figure of raster image



Enlarged figure of vector image

The [Lower] and [Upper] of the line width can each be input between [0] and [9999]%.
The default setting for the [Lower] is [50] and for the [Upper] is [200].

If the [Upper] = [100], and the [Lower] = [100], the width of the main lines will remain fixed, regardless of the scale. However, if the [Lower] = [100], the picture may become filled with black during a scale reduction since the line thickness will not change.

Step: 11 Nesting

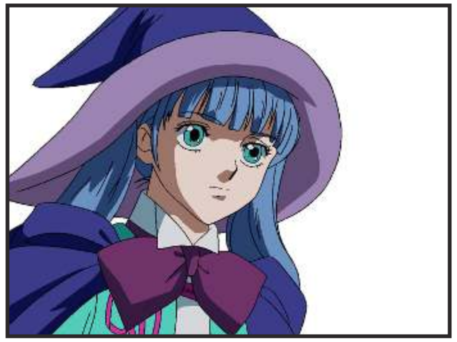
In this step, an explanation is given about nesting methods.

About nesting

In the cel bank, it is possible to load X-sheets instead of images. This is known as X-sheet [Nesting].

Example of use

Using the CoreRETAS HD nesting function to create an animation in which a ripple glass mask image is moved to give the appearance that the ripple glass is flowing.



Original image 640 x 480 pixels

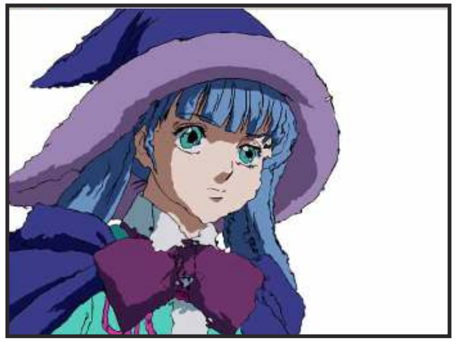
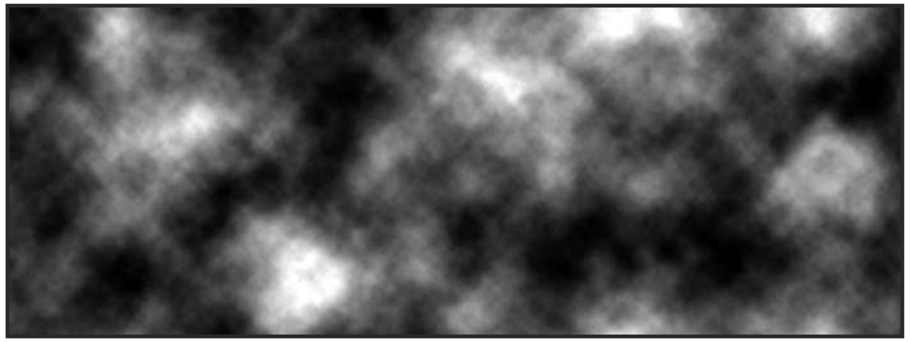
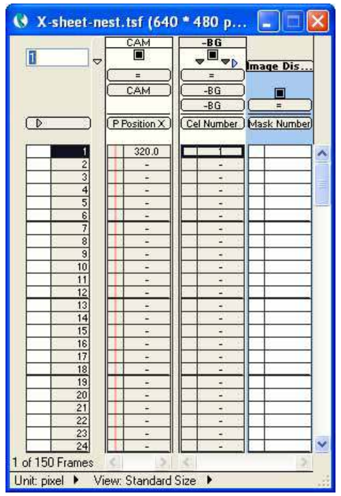


Image after distortion (Ripple glass effect moves from right to left)



Mask image (Ripple glass image moving from left to right) 1280 x 480 pixels

Parent X-sheet



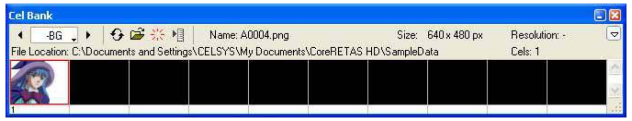
X-sheet-nest.tsf (640 * 480 p...

	CAM P Position X	-BG Cel Number	Image Dis... Mask Number
1	320.0	1	
2	-	-	
3	-	-	
4	-	-	
5	-	-	
6	-	-	
7	-	-	
8	-	-	
9	-	-	
10	-	-	
11	-	-	
12	-	-	
13	-	-	
14	-	-	
15	-	-	
16	-	-	
17	-	-	
18	-	-	
19	-	-	
20	-	-	
21	-	-	
22	-	-	
23	-	-	
24	-	-	

1 of 150 Frames

Unit: pixel View: Standard Size

Camera size 640 x 480 pixels



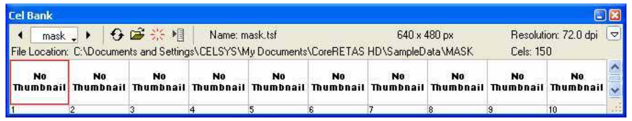
Cel Bank

-BG Name: A0004.png Size: 640 x 480 px Resolution: -

File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData Cels: 1

[-BG] layer cel bank

Background image



Cel Bank

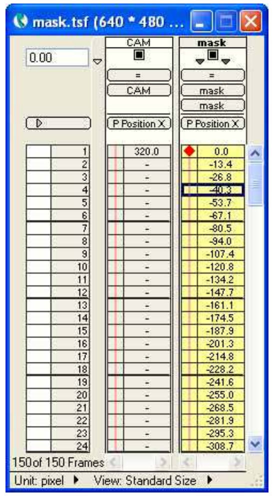
mask Name: mask.tsf 640 x 480 px Resolution: 72.0 dpi

File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\MASK Cels: 150

[Image Distort] layer cel bank

The child X-sheet in which the mask image was loaded is loaded to the parent X-sheet.

Child X-sheet



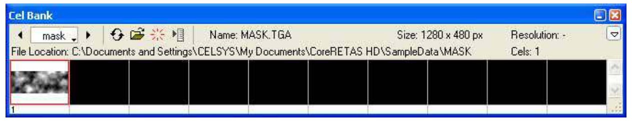
mask.tsf (640 * 480 ...

	CAM P Position X	mask P Position X
1	320.0	0.0
2	-	-13.4
3	-	-26.8
4	-	-40.3
5	-	-53.7
6	-	-67.1
7	-	-80.5
8	-	-94.0
9	-	-107.4
10	-	-120.8
11	-	-134.2
12	-	-147.7
13	-	-161.1
14	-	-174.5
15	-	-187.9
16	-	-201.3
17	-	-214.8
18	-	-228.2
19	-	-241.6
20	-	-255.0
21	-	-268.5
22	-	-281.9
23	-	-295.3
24	-	-308.7

150of 150 Frames

Unit: pixel View: Standard Size

Camera size 640 x 480 pixels
X-sheet in which the lengthwise mask image slides in the left-right direction.

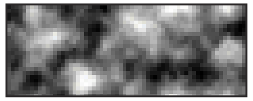


Cel Bank

mask Name: MASK.TGA Size: 1280 x 480 px Resolution: -

File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\MASK Cels: 1

[-BG] layer cel bank



Mask image

POINT

Viewing nested X-sheets

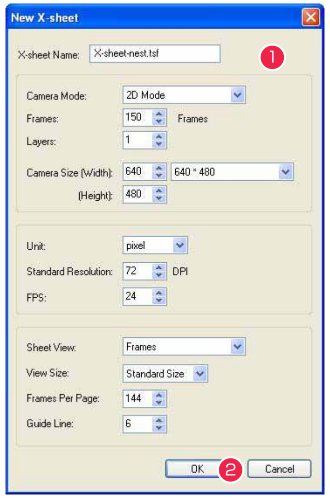
- Double-clicking the thumbnails shown in the cel bank of the X-sheet [Image Distort] layer will call up the nested child X-sheet.
- The images loaded into the nested X-sheets will not be shown in the [Cel Bank] window preview.

Nesting procedure

An explanation is given of the nesting procedure.

1.Setting the parent X-sheet

a. Select [New X-sheet...] from the [File] menu to open the [New X-sheet] dialog box.



New X-sheet

X-sheet Name: X-sheet-nest.tsf
Camera Mode: 2D Mode
Frames: 150 Frames
Layers: 1
Camera Size (Width): 640 640 * 480
(Height): 480
Unit: pixel
Standard Resolution: 72 DPI
FPS: 24
Sheet View: Frames
View Size: Standard Size
Frames Per Page: 144
Guide Line: 6

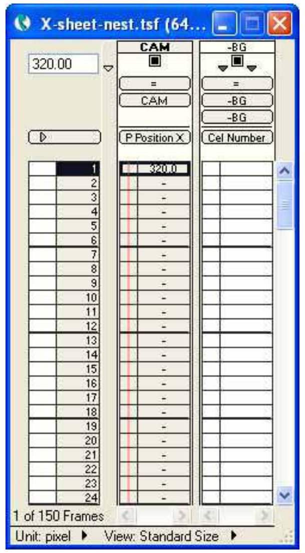
❶
OK
❷
Cancel

❶ Input the following settings.

X-sheet Name: X-sheet-nest.tsf
Frames: 150
Layers: 1

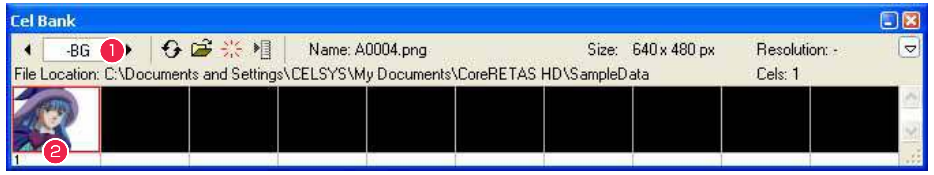
❷ Press the [OK] button.

b. The parent X-sheet [X-sheet] window will be shown.



X-sheet-nest.tsf (64...
320.00
CAM
CAM
P Position X
-BG
-BG
-BG
Cel Number
320.0
1 of 150 Frames
Unit: pixel
View: Standard Size

c. While the parent X-sheet is in the open condition, select [Cel Bank] from the [Window] menu to open the cel bank.



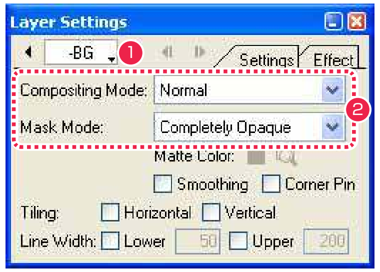
Cel Bank

Name: A0004.png
Size: 640 x 480 px
Resolution: -
File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData
Cels: 1

❶ Select the [-BG] layer.

❷ Load the [Image].

d. While the parent X-sheet is in the open condition, select [Layer Settings] from the [Window] menu to open the [Layer Settings] palette.



Layer Settings

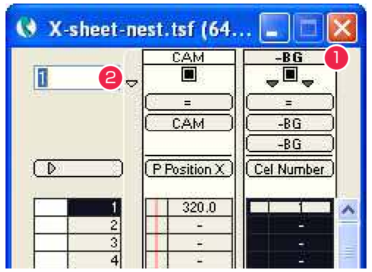
Compositing Mode: Normal
Mask Mode: Completely Opaque
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

-BG
❶
Settings
Effect
❷

❶ Select the [-BG] layer.

❷ Set the compositing mode to [Normal] Compositing and the mask mode to [Completely Opaque].

e. Return to the [X-sheet] window of the parent X-sheet.

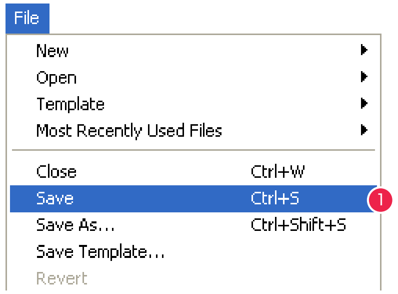


X-sheet-nest.tsf (64...
CAM
-BG
❶
1
❷
CAM
-BG
-BG
P Position X
Cel Number
320.0

❶ Double-click the layer title bar of the [-BG] layer to select all the frames of the [-BG] layer.

❷ Input [1] as the cel number.

f. Save the parent X-sheet.

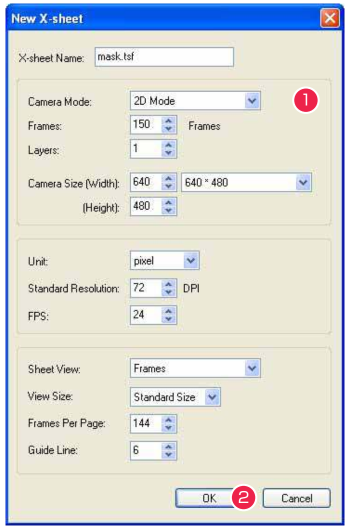


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
❶
Save As... Ctrl+Shift+S
Save Template...
Revert

❶ Select [Save] from the [File] menu.

2.Setting the child X-sheet

a. Using [X-sheet...] in the [New] menu, show the [New X-sheet] dialog box.


New X-sheet

X-sheet Name: mask.tsf

Camera Mode: 2D Mode
Frames: 150 Frames
Layers: 1
Camera Size (Width): 640 640 * 480
(Height): 480

Unit: pixel
Standard Resolution: 72 DPI
FPS: 24

Sheet View: Frames
View Size: Standard Size
Frames Per Page: 144
Guide Line: 6

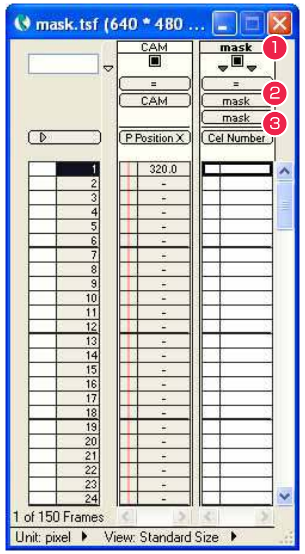
①
OK
②
Cancel

① Input the following settings.

X-sheet Name: mask.tsf
Frames: 150
Layers: 1

② Press the [OK] button.

b. The child X-sheet [X-sheet] window will be shown.

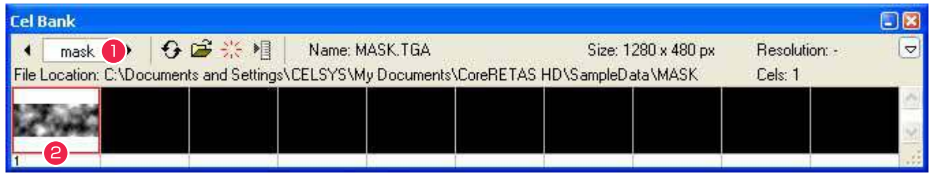

mask.tsf (640 * 480 ...
CAM
mask
①
=
CAM
mask
②
mask
③
P Position X
Cel Number
320.0
1 of 150 Frames
Unit: pixel
View: Standard Size

① Using [Layer] -> [Rename...] in the [X-sheet] menu, change the [-BG] layer name to [mask].

② Using [Pegbar] -> [Rename...] in the [X-sheet] menu, change the [-BG] pegbar name to [mask].

③ Using [Cel Bank] -> [Rename...] in the [X-sheet] menu, change the [-BG] cel bank name to [mask].

c. While the child X-sheet is in the selected condition, select [Cel Bank] from the [Window] menu to open the cel bank.


Cel Bank

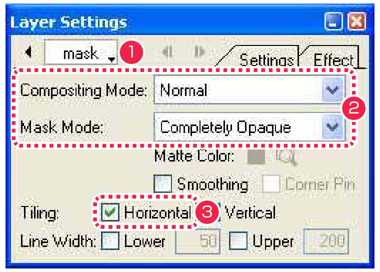
mask

Name: MASK.TGA
Size: 1280 x 480 px
Resolution: -
File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\MASK
Cels: 1

① Select the [mask] layer.

② Load the [Mask Image].

d. While the child X-sheet is in the selected condition, select [Layer Settings] from the [Window] menu to open the [Layer Settings] palette.


Layer Settings

mask

Compositing Mode: Normal
Mask Mode: Completely Opaque
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☑ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

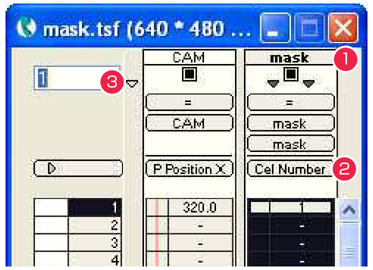
①
Settings
Effect
②
③

① Select the [mask] layer.

② Set the compositing mode to [Normal] Compositing and the mask mode to [Completely Opaque].

③ Set [Horizontal] in tiling.

e. Return to the [X-sheet] window of the child X-sheet.

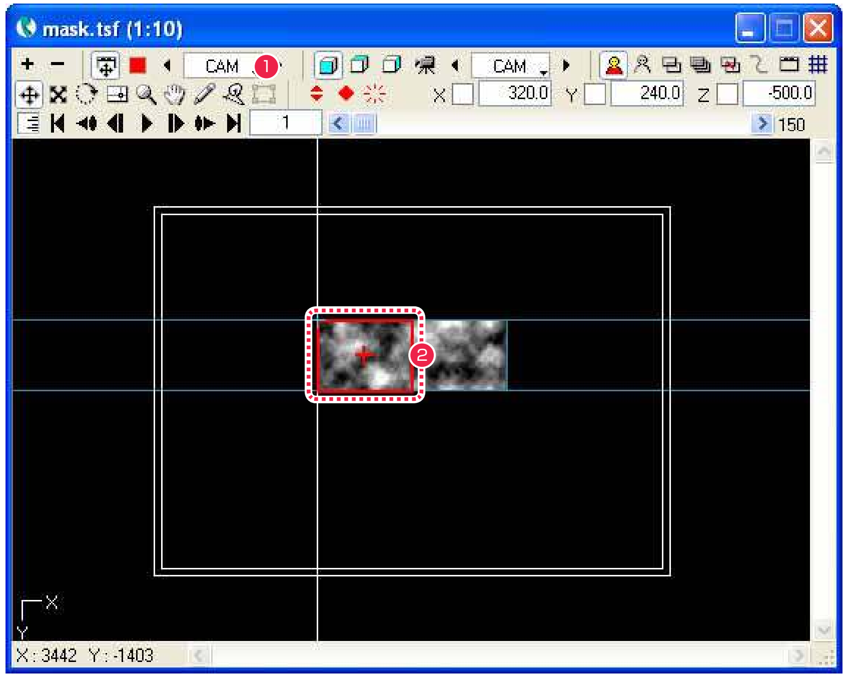

mask.tsf (640 * 480 ...
1
③
CAM
mask
①
=
CAM
mask
mask
P Position X
Cel Number
②
320.0

① Double-click the layer title bar of the [mask] layer to select all the frames of the [mask] layer.

② Select the [Cel Number].

③ Input [1] as the cel number.

f. Using [Stage] in the [Window] menu, open the child X-sheet (mask.tsf) [Stage] window.



mask.tsf (1:10)

CAM

X 320.0 Y 240.0 Z -500.0

1

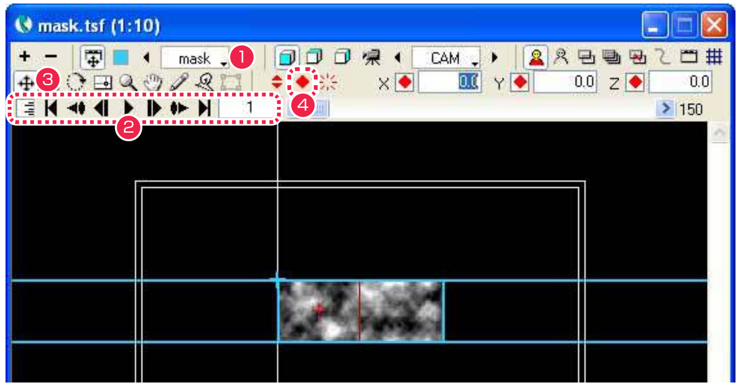
150

X : 3442 Y : -1403

① Switch the [Select Pegbar/Layer] button to [CAM].

② The camera is capturing the left hand portion of the image.

g. Set the [mask] pegbar to the 1st frame.



mask.tsf (1:10)

mask

CAM

X 0.0 Y 0.0 Z 0.0

1

150

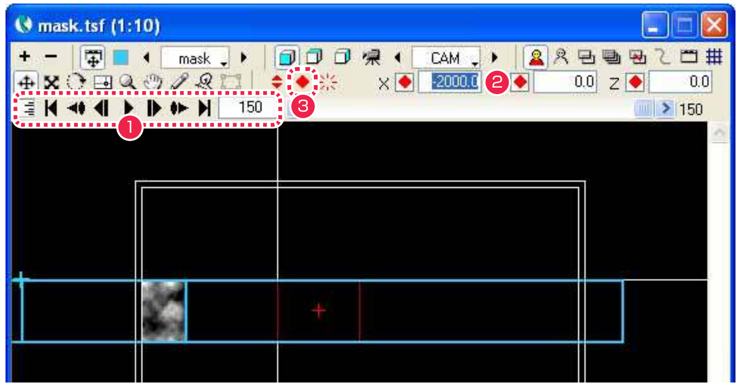
① Switch the [Select Pegbar/Layer] button to [mask].

② Confirm that the current frame is set to [1]. If it is not, set it to [1] using the frame control panel.

③ Click the [Move] button.

④ In the [P Position X] field selected condition, set a key frame using the [Continuous Key Frame Setting] button.

h. Set the [mask] layer to the 150th frame.



mask.tsf (1:10)

mask

CAM

X -2000.0 Y 0.0 Z 0.0

150

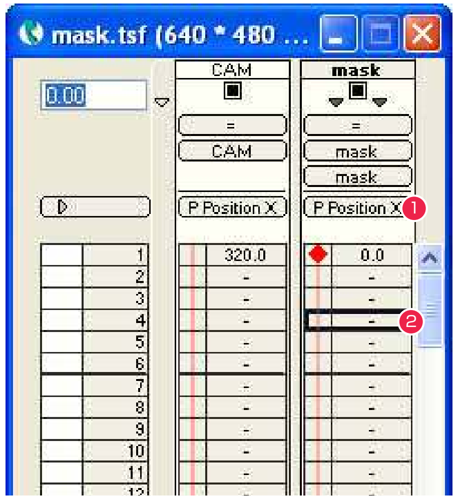
150

① Using the frame control panel, change the current frame to [150] (last frame).

② Input [-2000] in the [P Position X] field, and press the [Enter/Return] key to confirm it.

③ With the [P Position X] field in the selected condition, click the [Continuous Key Frame Setting] button to set a key frame.

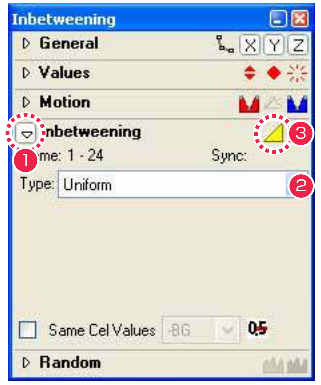
i. Implement inbetweening of the [mask] pegbar.


mask.tsf (640 * 480 ...
0.00
CAM
mask
=
CAM
mask
mask
P Position X
P Position X
1
2
3
4
5
6
7
8
9
10
11
12
320.0
0.0
①
②

① Select [P Position X] in the [X-sheet] window.

② Click on any one frame in the [mask] layer to select it.

j. Select [Inbetweening] from the [Window] menu to show the [Inbetweening] palette.

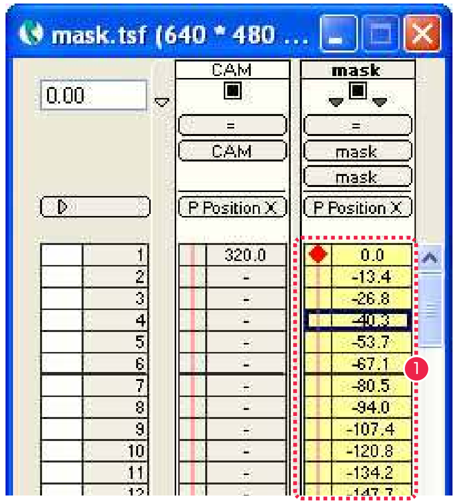

Inbetweening
General
X Y Z
Values
Motion
Inbetweening
Frame: 1 - 24
Sync:
Type: Uniform
Same Cel Values
BG
0.5
Random
①
②
③

① [Open the [Inbetweening] command setting panel.

② Select [Uniform] speed.

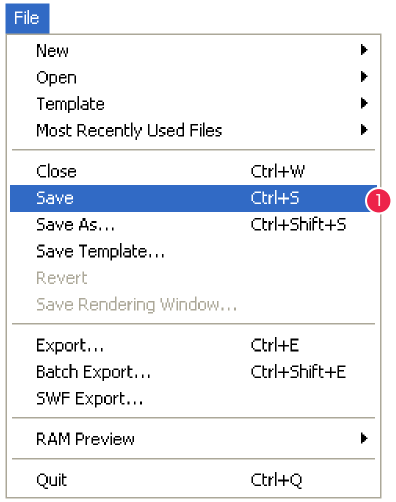
③ Click the [Auto Inbetweening] button to implement the inbetweening.

k. [Inbetweening] has been implemented for the camera work for frames 1 to 150.


mask.tsf (640 * 480 ...
0.00
CAM
mask
=
CAM
mask
mask
P Position X
P Position X
1
2
3
4
5
6
7
8
9
10
11
12
320.0
0.0
-13.4
-26.8
-40.3
-53.7
-67.1
-80.5
-94.0
-107.4
-120.8
-134.2
-147.7
①

① Inbetweening using [Uniform] speed has been applied to Frames 1-150.

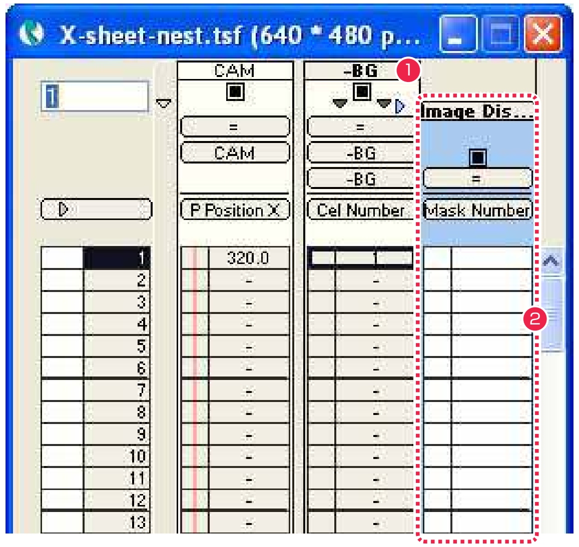
l. Save the child X-sheet.


File
New
Open
Template
Most Recently Used Files
Close Ctrl+W
Save Ctrl+S
Save As... Ctrl+Shift+S
Save Template...
Revert
Save Rendering Window...
Export... Ctrl+E
Batch Export... Ctrl+Shift+E
SWF Export...
RAM Preview
Quit Ctrl+Q
①

① Select [Save] from the [File] menu.

3.X-sheet nesting

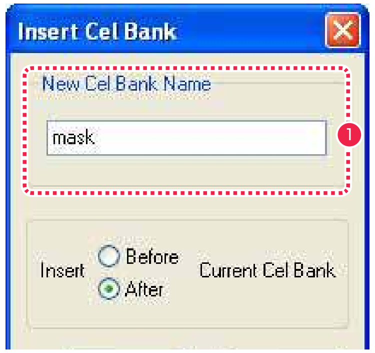
a. Open the parent X-sheet [X-sheet] window.


X-sheet-nest.tsf (640 * 480 p...
CAM
-BG
Image Dis...
CAM
-BG
-BG
P Position X
Cel Number
Mask Number
320.0
1
2
3
4
5
6
7
8
9
10
11
12
13
①
②

① Click the title bar of the [-BG] layer to set it as the current layer.

② Select [Add] -> [Distort] -> [Image Distort] from the [Effects] menu to add an [Image Distort] effect layer.

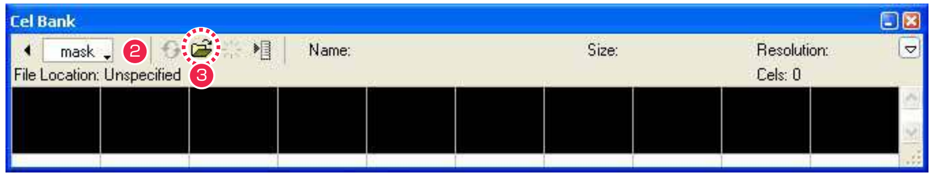
b. Show the parent X-sheet [Cel Bank] window.


Insert Cel Bank
New Cel Bank Name
Insert
Before
After
Current Cel Bank
①

New Cel Bank Name: mask

Insert: ○ Before ● After Current Cel Bank

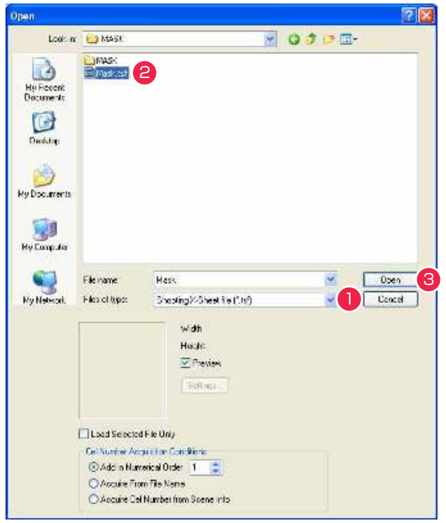
① Using [Cel Bank] -> [Insert...] in the [X-sheet] window, add [mask] to the cel bank.


Cel Bank
mask
Name:
Size:
Resolution:
File Location: Unspecified
Cels: 0
②
③

② Switch the cel bank to [mask].

③ Press the [Load] button.

c. The [Open File] dialog box will open.

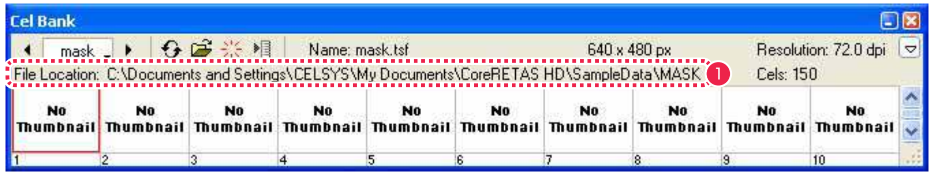

Open
Look in: MASK
My Recent Documents
Desktop
My Documents
My Computer
My Network
File name:
Files of type:
Open
Cancel
Width
Height
Preview
Load Selected File Only
Cel Number Acquisition Conditions
①
②
③

① Switch the [Files of type] to [Shooting X-sheet File].

② Select the child X-sheet [mask.tsf].

③ Press the [Open] button.

d. When the loading of the child X-sheet has been completed, [No Thumbnail] will be shown in the [Cel Bank] window.


Cel Bank
mask
No Thumbnail
1
2
3
4
5
6
7
8
9
10
①

Name: mask.tsf 640 x 480 px Resolution: 72.0 dpi

File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\MASK Cels: 150

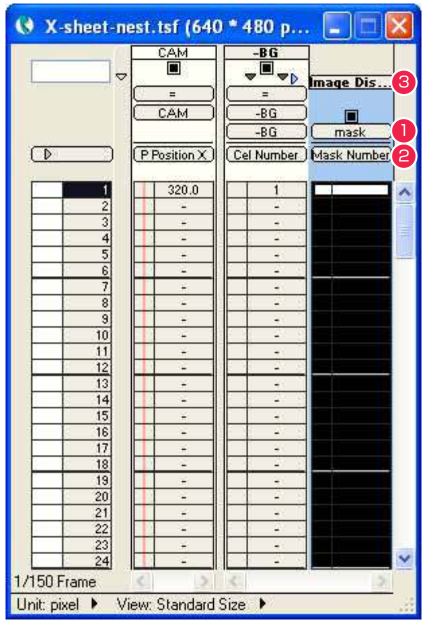
① When loading is completed, the saving location of the loaded X-sheet will be shown.

POINT

When nesting X-sheets, cel bank thumbnails are not shown

When X-sheets are nested, unlike the situation when images are loaded and thumbnails shown, [No Thumbnail] is displayed in the cel bank and the thumbnails are not shown.

e. Return to the [X-sheet] window of the parent X-sheet.

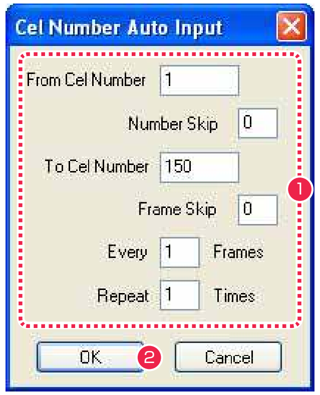

X-sheet-nest.tsf (640 * 480 p...
CAM
-BG
Image Dis...
CAM
-BG
-BG
mask
P Position X
Cel Number
Mask Number
320.0
1
1/150 Frame
Unit: pixel
View: Standard Size
①
②
③

❶ Switch the effects layer [Image Distort] [Select Cel Bank] menu from [=] to [mask].

❷ Confirm that the effects layer [Image Distort] input parameter selection menu is set to [Mask Number].

❸ Double-click the effects layer [Image Distort] title bar to select all the frames.

f. Select [Cel Number Auto Input...] from the [X-sheet] menu to show the [Cel Number Auto Input] dialog box.


Cel Number Auto Input
①
OK
②
Cancel

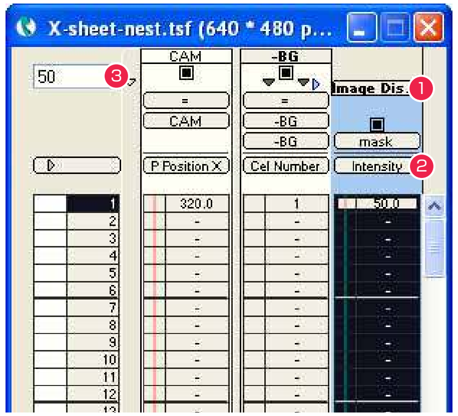
From Cel Number 1
Number Skip 0
To Cel Number 150
Frame Skip 0
Every 1 Frames
Repeat 1 Times

❶ Input the following to the dialog box.

From Cel Number [1]
Number Skip [0]
To Cel Number [150]
Frame Skip [0]
Every [1] Frames
Repeat [1] Times

❷ Click the [OK] button.

g. Return to the parent X-sheet [X-sheet] window.

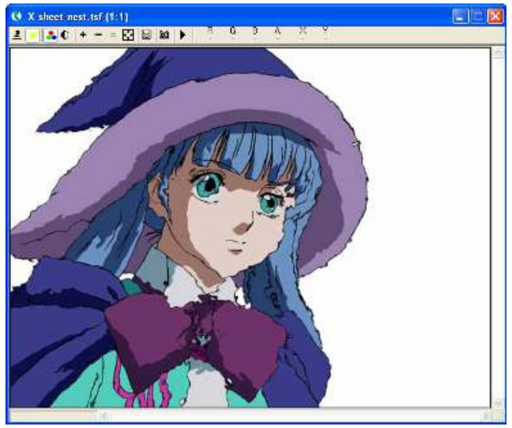

X-sheet-nest.tsf (640 * 480 p...
50
CAM
-BG
Image Dis.
CAM
-BG
-BG
mask
P Position X
Cel Number
Intensity
320.0
1
50.0
①
②
③

❶ Double-click the effects layer [Image Distort] title bar to select all the frames.

❷ Switch the effects layer [Image Distort] input parameter selection menu to [Intensity].

❸ Input [50] as the effects layer [Image Distort] [Intensity] and press the [Enter/Return] key to confirm it.

h. Show the [Rendering] window from the [Window] menu.


X sheet-nest.tsf (1:1)

Set the current frame to the [1] frame, and apply [Rendering of Current Frame] from the [Rendering] menu.

POINT

When the movement is to be confirmed

When the movement is to be confirmed, apply the [RAM Preview].

Step: 12

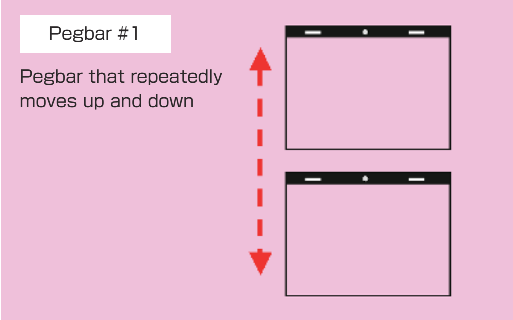
Parent-child pegbars

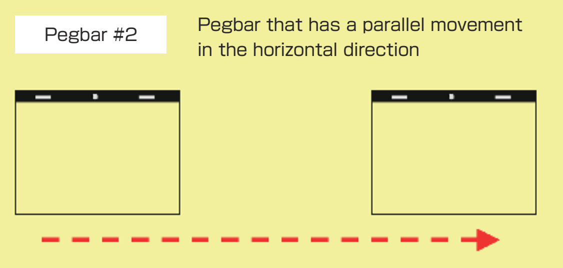
In this step, an explanation is given about parent-child pegbars.

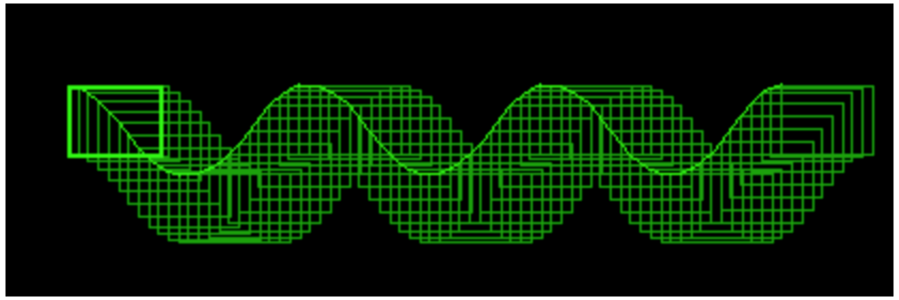
About parent-child pegbars

By setting another [Parent Pegbar] to a pegbar, it will be possible to composite the movement of several pegbars and set complex movements. The [Child] pegbars will be influenced by the parameters such as [Movement], [Zoom In & Zoom Out], and [Rotation] of the [Parent] pegbar.

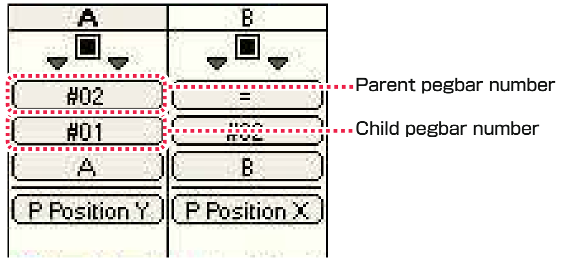
As shown below, pegbar [#1] is set to move up and down, and pegbar [#2] is set to move parallel to the horizontal as the parent pegbar. As a result of this, pegbar [#1] will move up and down as it moves along, in a movement that groups together the movements of pegbar [#1] and pegbar [#2]. This type of movement, which is difficult to set manually, can be easily set using the parent-child pegbar.


Pegbar #1
Pegbar that repeatedly moves up and down


Pegbar #2
Pegbar that has a parallel movement in the horizontal direction



Situation when the parent pegbar is set to [#2] and the child pegbar is set to [#1].

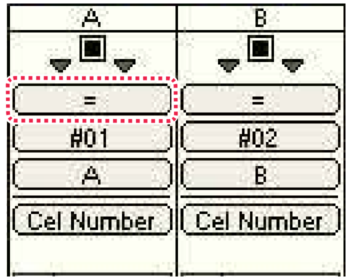

A
B
#02
=
#01
#02
A
B
P Position Y
P Position X
Parent pegbar number
Child pegbar number

The parent pegbar of [Pegbar #1] is set to [Pegbar #2].

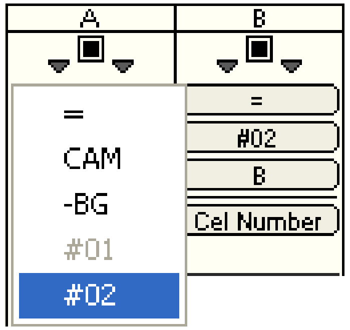
POINT

- A pegbar can only be set as the parent to one other pegbar.
- The child pegbar will be converted to the relative coordinates of the parent pegbar. When the link to the parent pegbar is deleted, the child pegbar will return to the coordinates that it had previously.

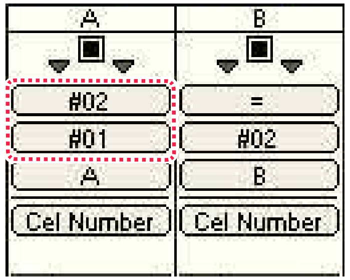
Setting a parent pegbar


A
B
=
=
#01
#02
A
B
Cel Number
Cel Number

① Click the [Select Parent Pegbar] menu of the layer that is to be set as the parent pegbar.


A
B
=
CAM
-BG
#01
#02
=
#02
B
Cel Number

② Select the pegbar that will be set as the parent from the displayed [Select Parent Pegbar] menu.


A
B
#02
=
#01
#02
A
B
Cel Number
Cel Number

③ The parent-child pegbars will be set.
(The [#02] pegbar of the [B] layer will be set as the parent pegbar, and the [#01] pegbar of the [A] layer will be set as the child pegbar)

Step: 13

Multi-camera

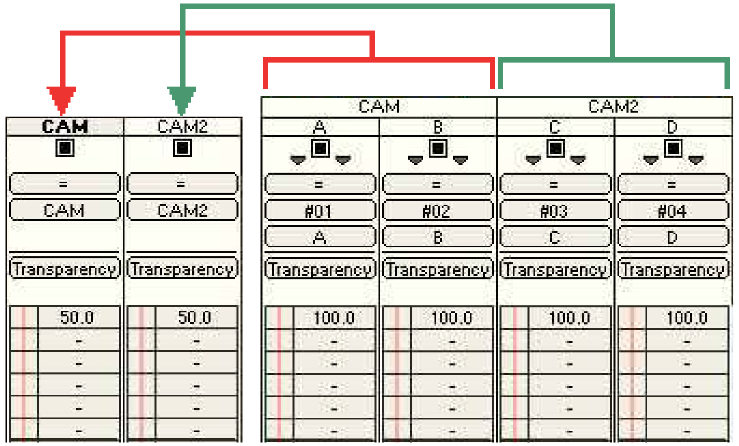
In this step, an explanation is given of multi-camera.

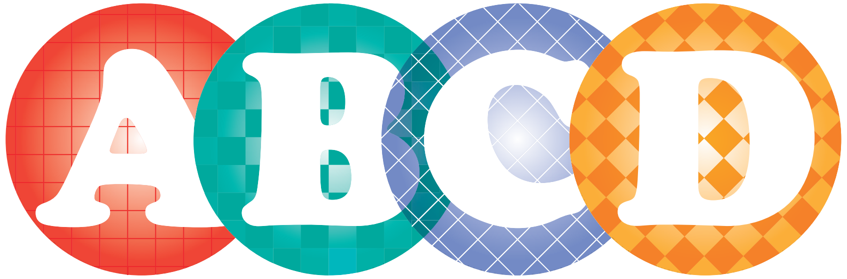
About multi-camera

By utilizing several [Camera Layers] when shooting (through grouping each layer with a [Camera Layer]), it will be possible to overlap images captured by a number of cameras.

Situation in which multi-cameras are set

It will be possible to set different compositing modes and transparencies to each of the [Camera Layers].

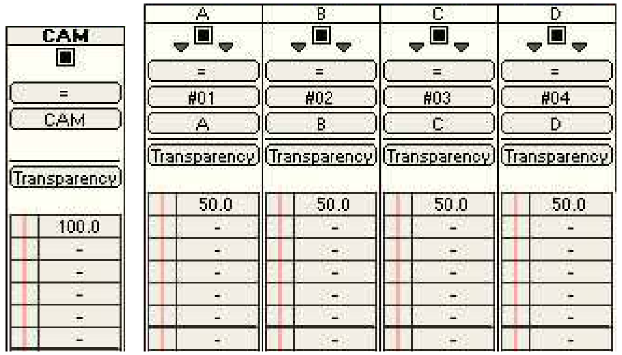


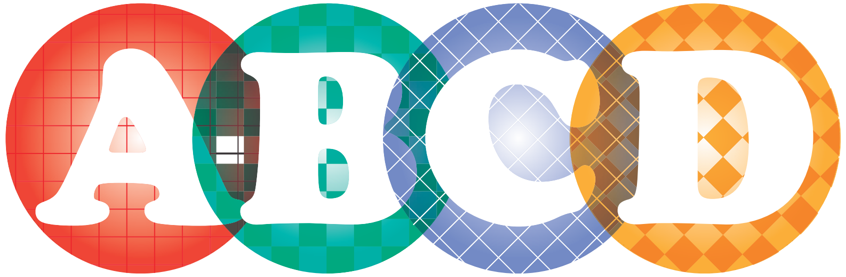


In the above example, the [Result of Layering [A] and [B]], and the [Result of Layering [C] and [D]] are grouped together in the [Camera Layer], each as a single image that has 50% transparency applied. Although the overlapping parts of [[A] & [B]] and [[C] & [D]] will be hidden, the cells where the two groups [[B] & [C]] are layered will be transparent.

In the previous version of the software, in order to carry out the above shooting it was required to export two types of overlapping images on both sides. Since CoreRETAS HD allows overlapping of each shooting result using several cameras, it will be possible to realize this in a single X-sheet.

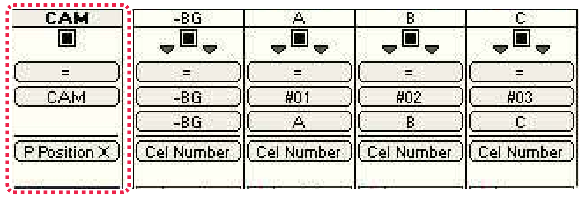
Situation in which multi-cameras are not set



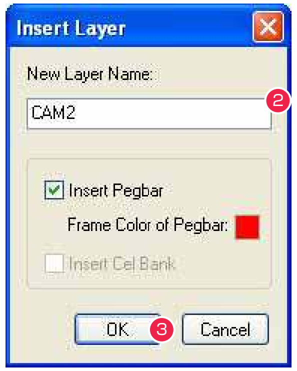


In the above example, since a 50% transparency is applied to each cell layer, all of the cels will appear to be semi-transparent. Even if each of the [Transparencies] are adjusted, the image shown on the previous page will not be shown.

Setting multi-cameras


CAM
-BG
A
B
C
=
CAM
-BG
#01
#02
#03
-BG
A
B
C
P Position X
Cel Number
Cel Number
Cel Number
Cel Number

① In the situation where the [Camera Layer] has been set to the [Current Layer], selecting [Layer] -> [Insert...] from the [X-sheet] menu will show the [Insert Layer] dialog box.



Insert Layer

New Layer Name:

CAM2 ②

☑ Insert Pegbar

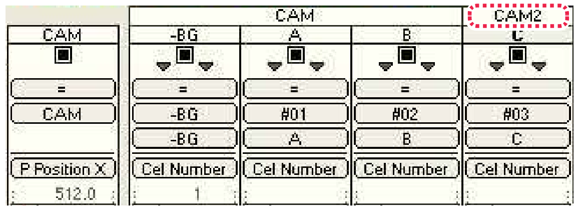
Frame Color of Pegbar: 🟥

☐ Insert Cel Bank

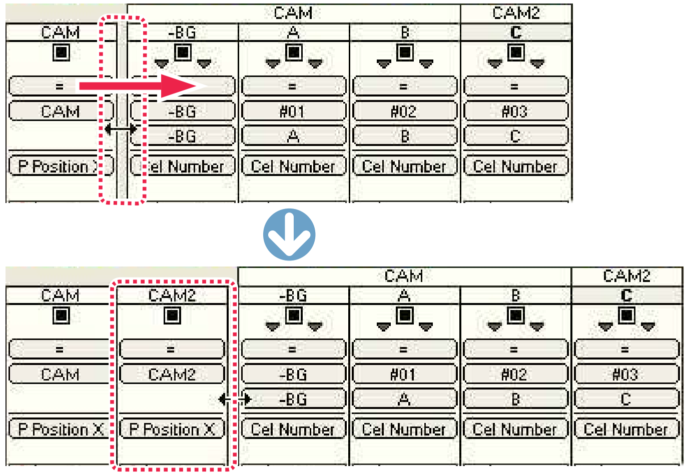
OK ③ Cancel

② Input the [New Layer Name].

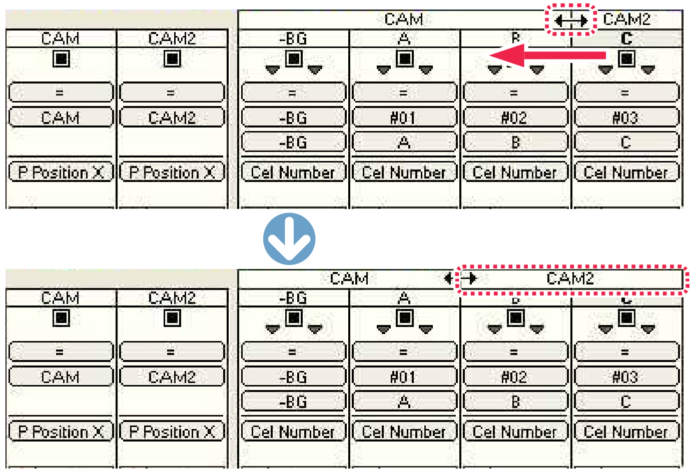
③ Click the [OK] button.


CAM
CAM2
CAM
-BG
A
B
C
=
CAM
-BG
#01
#02
#03
-BG
A
B
C
P Position X
Cel Number
512.0
1

④ A new [Camera Layer] will be created, and a [Camera Title Bar] will be shown above the [Cel Layer] [Title Bar] (The new [Camera Layer] [Camera Title Bar] will be set to the right side of the layer set by the [Current Layer] camera, or in a situation where a number of layers have already been specified, to the right side of these layers)


CAM
CAM2
CAM
CAM2
-BG
A
B
C
=
CAM
CAM2
-BG
#01
#02
#03
-BG
A
B
C
P Position X
P Position X
Cel Number

⑤ By dragging the right edge of the [Camera Layer] and sliding it to the right, the newly created [Camera Layer] will be shown.


CAM
CAM2
CAM
CAM2
-BG
A
B
C
=
CAM
CAM2
-BG
#01
#02
#03
-BG
A
B
C
P Position X
P Position X
Cel Number

⑥ By dragging the [Camera Title Bar] boundaries left and right, it will be possible to set the ranges of each [Camera Layer].

POINT

The same cameras should be used for adjoining layers

For each [Camera Layer], it will not be possible to miss out layers, such as by selecting [Only [A] to [C]] from layers [A] to [D].

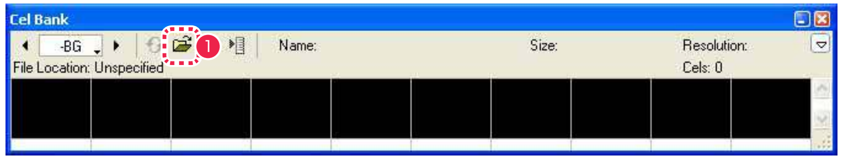
Step: 14 RLA file reading

In this step, an explanation is given about reading in RLA files.

By reading in RLA format files, it will be possible to give depth to images.
The RLA format is a 2D still image format that is usually output by 3D-CG software.
Since each pixel had a Z coordinate (Z depth), it will be possible to carry out overlapping processing in pixel units. Further, it will be possible to extract specific object images from the image based on the [Object ID].

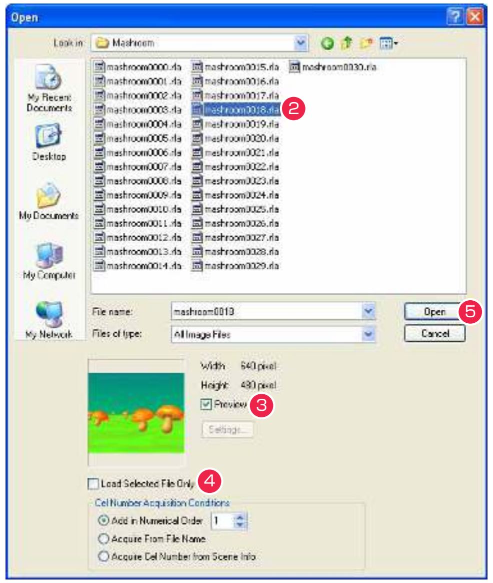
Preparation for reading in

Select [Cel Bank] from the [Window] menu to show the [Cel Bank] palette.


Cel Bank
-BG
①

Name:
Size:
Resolution:
File Location: Unspecified
Cels: 0

① Click the [Load...] button to show the [Open] dialog box.


Open
My Recent Documents
Desktop
My Documents
My Computer
My Network
mashroom0000.rla
mashroom0001.rla
mashroom0002.rla
mashroom0003.rla
mashroom0004.rla
mashroom0005.rla
mashroom0006.rla
mashroom0007.rla
mashroom0008.rla
mashroom0009.rla
mashroom0010.rla
mashroom0011.rla
mashroom0012.rla
mashroom0013.rla
mashroom0014.rla
mashroom0015.rla
mashroom0016.rla
mashroom0017.rla
mashroom0018.rla
mashroom0019.rla
mashroom0020.rla
mashroom0021.rla
mashroom0022.rla
mashroom0023.rla
mashroom0024.rla
mashroom0025.rla
mashroom0026.rla
mashroom0027.rla
mashroom0028.rla
mashroom0029.rla
mashroom0030.rla
②
Open ⑤
Cancel
③
Settings...
④

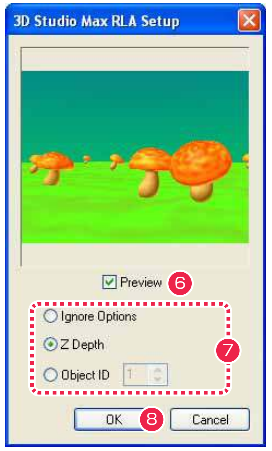
Look in: Mashroom
File name: mashroom0018
Files of type: All Image Files
Width: 640 pixel
Height: 480 pixel
☑ Preview
☐ Load Selected File Only
Cel Number Acquisition Conditions
● Add in Numerical Order 1
○ Acquire From File Name
○ Acquire Cel Number from Scene Info

② Open the folder containing the RLA files that are to be loaded, and select an optional file.

③ Check that preview is set to "On", and confirm the image.

④ If [Load Selected File Only] is set to "On", only the selected file will be loaded, while if it is set to "Off", all the files in the same folder will be loaded.

⑤ With any one of the files in the selected condition, click the [Open] button to open the settings dialog box.

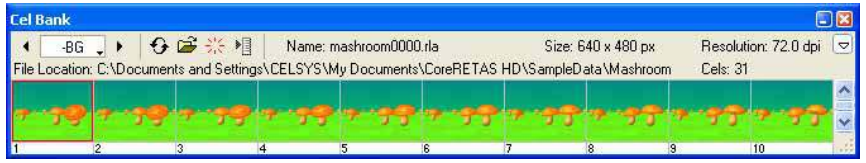

3D Studio Max RLA Setup
⑥
⑦
OK ⑧
Cancel

☑ Preview
○ Ignore Options
● Z Depth
○ Object ID 1

⑥ Set [Preview] to "On" to allow confirmation using the preview image according to the currently selected settings. The file that was loaded in the topmost position of the [Cel Bank] will be shown.

⑦ Select the RLA reading-in format from [Ignore Options], [Z Depth], and [Object ID].
When selecting [Object ID], also specify the ID number of the object.

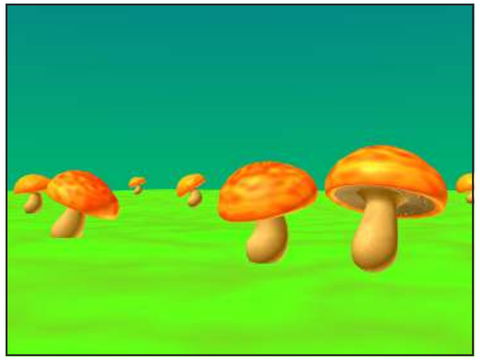
⑧ Click the [OK] button to load the images in to the [Cel Bank].


Cel Bank
-BG
1
2
3
4
5
6
7
8
9
10

Name: mashroom0000.rla
Size: 640 x 480 px
Resolution: 72.0 dpi
File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\Mashroom
Cels: 31

Reading In (1): reading in as a single still image (ignore options)

By selecting [Ignore Options], the various information (options) added to the RLA file will be ignored, and the file will be read in as a single still image.



Reading In (2): reading in as an image with depth (Z depth)

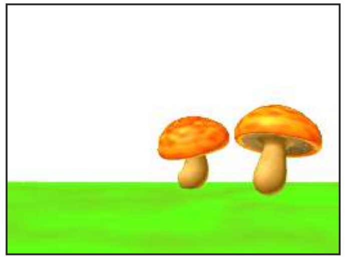
Pixels that are positioned closer than the Z coordinate ([P Position Z], [Position Z]) of the layer (*) in which the RLA file is loaded will be shown on the screen.

Conversely, pixels that are positioned further away than the Z coordinate ([P Position Z], [Position Z]) of the layer (*) in which the RLA file is loaded will be considered as a transparent color (RGB=255, 255, 255) and will not be shown on the screen.

* Layer that has been linked to the [Cel Bank] in which the RLA file with [Z Depth] has been loaded.

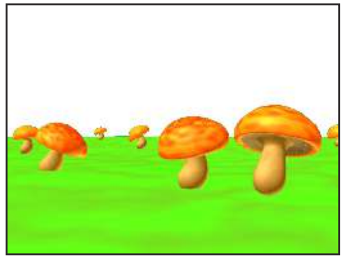
Example of changing the [P Position Z] of the loaded RLA image with [Z Depth]

When P Position Z is [-200]



Pixels positioned closer than [-200] will be shown.

When P Position Z is [2000]



Pixels positioned closer than [2000] will be shown.

POINT

The Z depth should be set before reading in

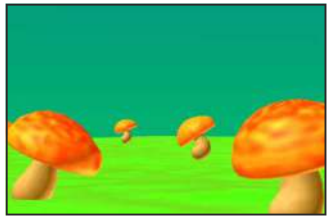
In order to utilize the [Z Depth] of the RLA file, it will be necessary to add the [Z Depth] and [Z Applicable Range] information before exporting the RLA file using another application. For more details about [Z Depth], see the relevant 3D-CG software manual.

The layer setting should be white transparent

For layers in which RLA files with [Z Depth] have been loaded, the [Layer Setting] should be set to [White Transparent].

Example of grouping with cels

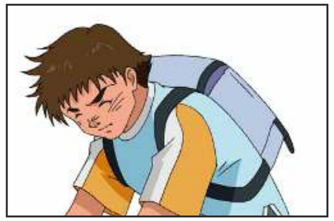
[-BG] (Completely Opaque)
[Ignore Options] (2D background)



[P Position Z] = 0

+

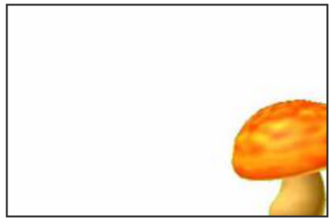
[A] cel (White Transparent)



[P Position Z] = 0

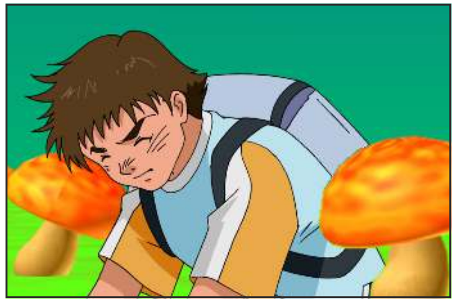
+

[B] cel (White Transparent)
[Z Depth]

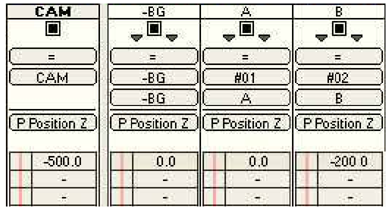


[P Position Z] = -200

=



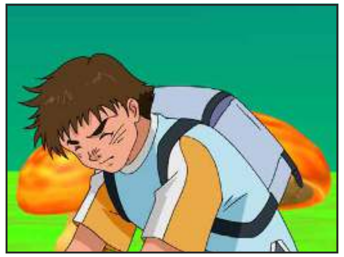
Composited Result



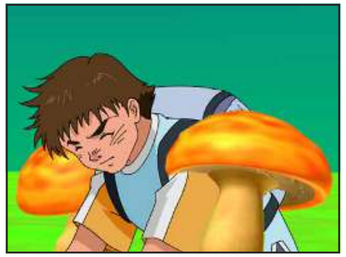
CAM	-BG	A	B
=	=	=	=
CAM	-BG	#01	#02
	-BG	A	B
P Position Z	P Position Z	P Position Z	P Position Z
-500.0	0.0	0.0	-200.0
-	-	-	-
-	-	-	-

Example where characters pass through objects

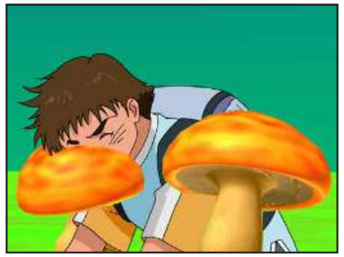
By controlling the [P Position Z] value, it is possible to realize image effects in which a 2D character appears to pass through 3D objects.



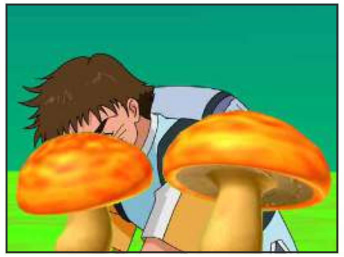
[P Position Z] = -300



[P Position Z] = -260



[P Position Z] = -240



[P Position Z] = -200

Reading In (3): specifying and reading in specific objects (object ID)

RLA files may include separate objects that have been allocated IDs.
Selecting the [Object ID] allows reading in only of the object with the specific ID.

Various objects with IDs

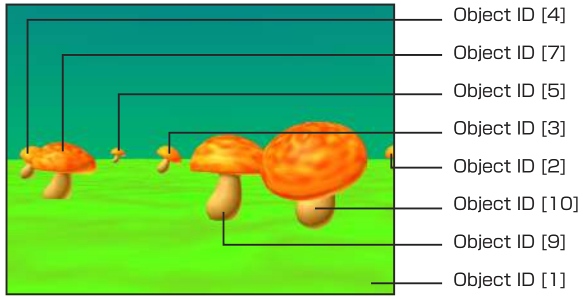
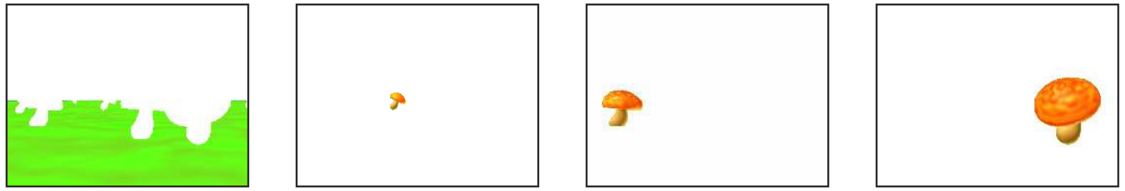
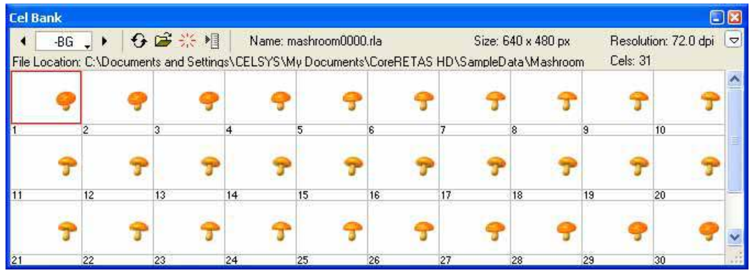

Object ID [4]
Object ID [7]
Object ID [5]
Object ID [3]
Object ID [2]
Object ID [10]
Object ID [9]
Object ID [1]

Image with [Object ID] specified



Object ID [1] Object ID [3] Object ID [7] Object ID [10]

In the [Cel Bank], the images of the series of movements extracting only the specified object will be loaded.


Cel Bank
-BG
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
22
23
24
25
26
27
28
29
30

Name: mashroom0000.rla Size: 640 x 480 px Resolution: 72.0 dpi
File Location: C:\Documents and Settings\CELSYS\My Documents\CoreRETAS HD\SampleData\Mashroom Cels: 31

When object ID [10] has been loaded to the [Cel Bank].

POINT

The object ID should be set before reading in

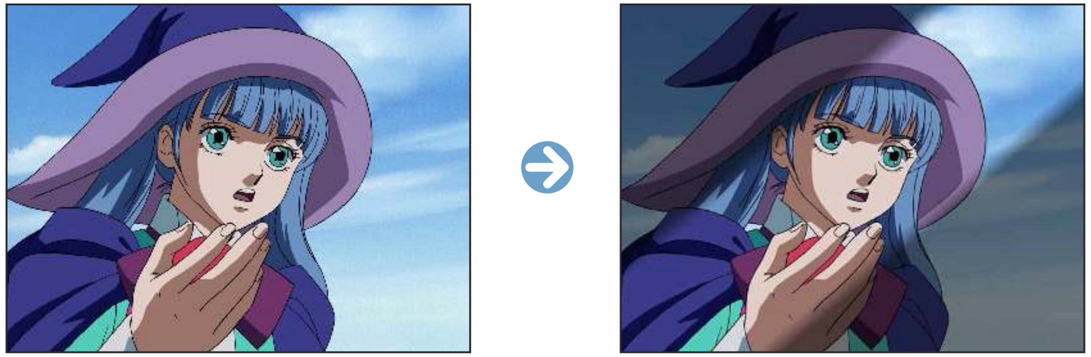
In order to utilize the [Object IDs] of the RLA file, it will be necessary to add the [Object] and [Z Applicable Range] information before exporting the RLA file using another application. For more details about [Objects], see the relevant 3D-CG software manual.

Step: 15 Paraffin overlay and para multi

[Paraffin Overlay] and [Para Multi] involve the attaching of colored paraffin paper in front of the shooting camera lens to add shadows to the screen. CoreRETAS HD also allows [Paraffin Overlay] to be carried out.

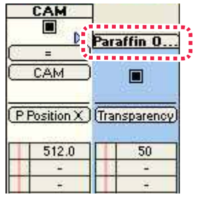
[Paraffin Overlay] filter

The [Color Paraffin] filter allows paraffin overlay to be carried out on the camera layer without requiring the preparation of a dedicated mask image.



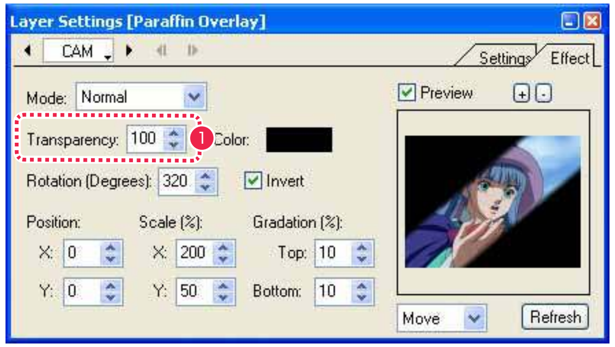
1. Adding the [Paraffin Overlay] filter

Open the X-sheet and add a [Paraffin Overlay] filter to the [CAM] layer.



2. Setting the [Paraffin Overlay] details

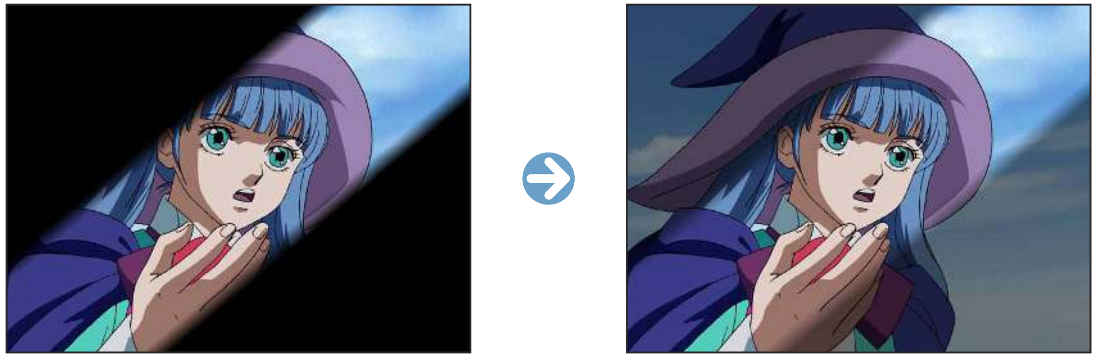
Set the [Paraffin Overlay] details, such as transparency, color, position, and angle using the [Layer Settings] palette.



Layer Settings [Paraffin Overlay]

Mode: Normal
Transparency: 100 ①
Color:
Rotation (Degrees): 320
☑ Invert
Position: X: 0 Y: 0
Scale (%): X: 200 Y: 50
Gradation (%): Top: 10 Bottom: 10
☑ Preview

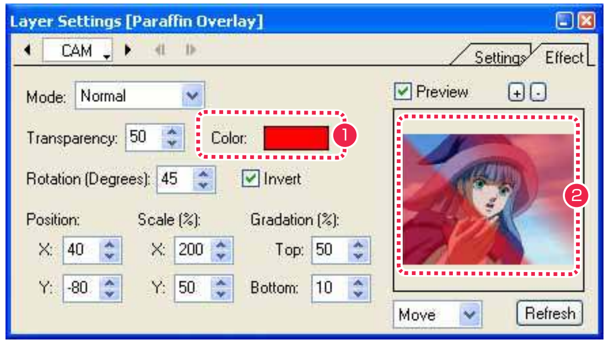
① [Transparency] allows adjustment of the transparency of the paraffin overlay part. By changing the parameters on the X-sheet, it will be possible to change the transparency as the animation progresses.



Transparency: 100 Transparency: 50

3. Changing the [Paraffin Overlay] settings

The paraffin overlay settings can be changed using the [Layer Settings] palette even after the overlay has been created.



Mode: Normal

Transparency: 50

Color: 🟥

Rotation (Degrees): 45

☑ Invert

Position: X: 40 Y: -80

Scale (%): X: 200 Y: 50

Gradation (%): Top: 50 Bottom: 10

☑ Preview

① By clicking the [Color] display button, it is possible to set the color of the paraffin overlay.

② The position of the paraffin overlay may be set by dragging it inside the [Preview].

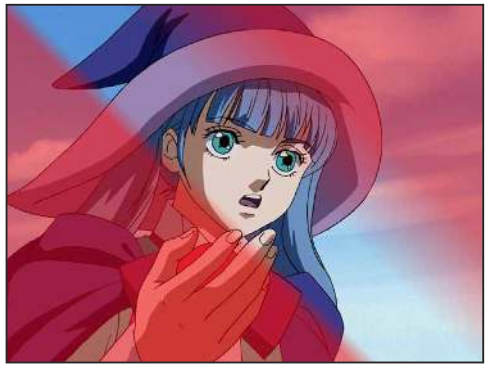


Image resulting from the above settings

As shown above, the fill color does not have to be black. Further, it is also possible to set the color to white to white-out the surroundings.

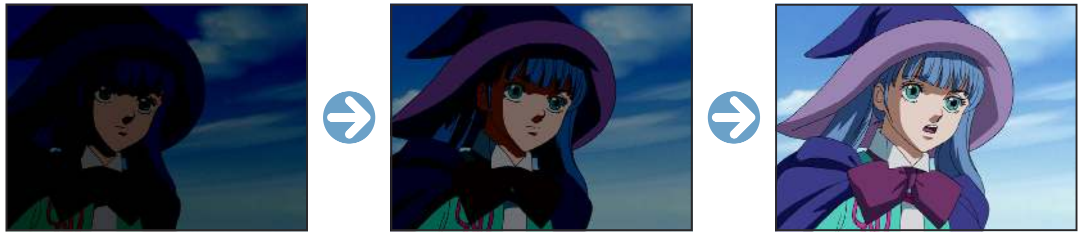
Step: 16

Exposure effects

The [RGB] filter is used to express the exposure effects of film shooting using CoreRETAS HD.

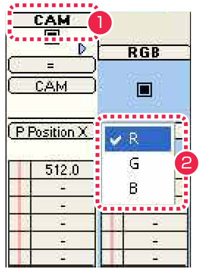
Fade in (fade out)

As an example, apply an 18-frame fade in to the start of the X-sheet scene.



1. Loading the RGB filter

Load an [RGB] filter to the [CAM] layer, and operate the values.

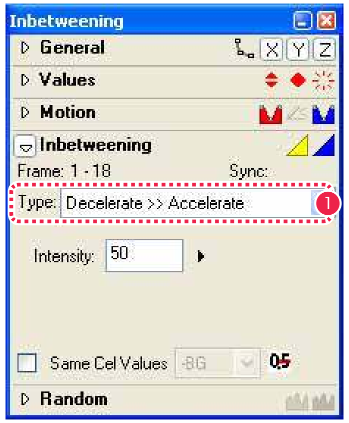


① Select the [CAM] layer, and select [Add]->[Tone Adjustment] ->[RGB] from the [Effects] menu to load an RGB filter.

② To add a fade in effect, select each of the [R], [G], and [B] filters in turn from the X-sheet [Input Parameter Selection] Menu and set all of the parameters of the starting frame (1st Frame) to [-100].
Then set all of the parameters of the [R], [G], and [B] filters of the finishing frame (18th Frame) to [0].

2. Carrying out the inbetweening settings

Next, carry out the inbetweening settings. If the inbetweening speed is set to [Uniform], the fade in time will appear shorter than it actually is. By setting the inbetweening speed setting to [Decelerate >> Accelerate], it will be possible to realize an effect that will appear natural.



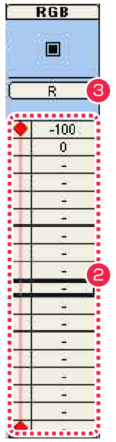
Frame: 1 - 18 Sync:

Type: Decelerate >> Accelerate

Intensity: 50

☐ Same Cel Values

① Select [Decelerate >> Accelerate] as the [Inbetweening] type from the [Inbetweening] palette.

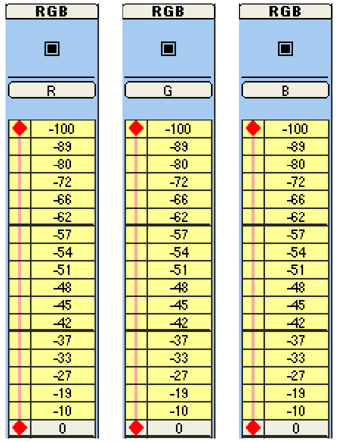


② Select an optional frame between the two key frames on the X-sheet, and click the [Auto Inbetweening] button in the [Inbetweening] palette to implement the inbetweening.

③ Using the same procedure, carry out the inbetweening for the [R] filter, [G] filter, and [B] filter.

3. The fade in operation has been completed

The above operation completes the fade in operation.



R	G	B
-100	-100	-100
-89	-89	-89
-80	-80	-80
-72	-72	-72
-66	-66	-66
-62	-62	-62
-57	-57	-57
-54	-54	-54
-51	-51	-51
-48	-48	-48
-45	-45	-45
-42	-42	-42
-37	-37	-37
-33	-33	-33
-27	-27	-27
-19	-19	-19
-10	-10	-10
0	0	0

[Figure: Completed X-sheet]

Using the same procedure as described above, changing the RGB filter values at the end of the scene from 0% to -100% will allow a fade out effect to be applied.
Further, setting the change direction to plus (100%) instead of minus (-100%) will allow white in and white out to be realized.

* For more details of X-sheet inbetweening, see [Chapter 4. Application Description: shooting].

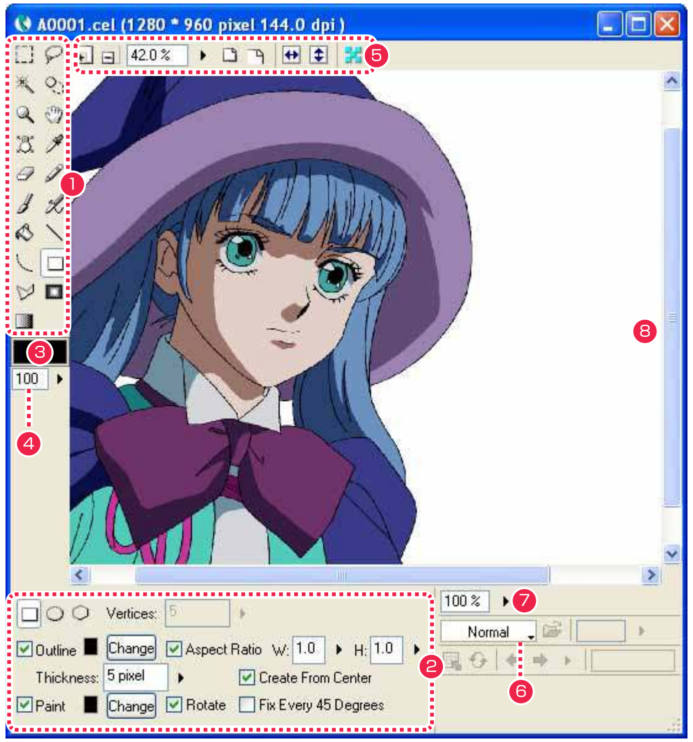
Step: 17 Image editing

Using CoreRETAS, it is possible to carry out simple image revision.
Raster images that do not have layers can be edited.

Cel window (normal mode)

Image editing change layer structure and vector images into single raster image.
The image editing can use the [Effects] menu filters, and can use [Save], [Save As] in the [File] menu.

Double-clicking an image file in the cel bank or file browser (double click a cel), will show the [Cel] window. To open a rendering image, select [Open] -> [Rendering Image of Current Frame] from the [File] menu.


A0001.cel (1280 * 960 pixel 144.0 dpi)

42.0 %

100

Vertices: 5

☑ Outline Change ☑ Aspect Ratio W: 1.0 H: 1.0

Thickness: 5 pixel ☑ Create From Center

☑ Paint Change ☑ Rotate ☐ Fix Every 45 Degrees

100 %

Normal

① Tools
Used for image editing.

② Tool options
Shows the options of the selected tool.

③ [Foreground Color] button
Shows the currently selected [Foreground Color]. By clicking the button, a dialog box will be shown and the color may be changed.

④ [Transparency]
Shows the [Transparency] of the [Foreground Color].

⑤ Tool bar
Used for adjusting the screen view.

⑥ [Mode Switching] menu
Allows switching between the [Normal], [Light Table] and [Alpha Edit] modes.

⑦ [Opacity] button
Adjusts the opacity of the [Normal Mode] edited image.

⑧ [Image View] area

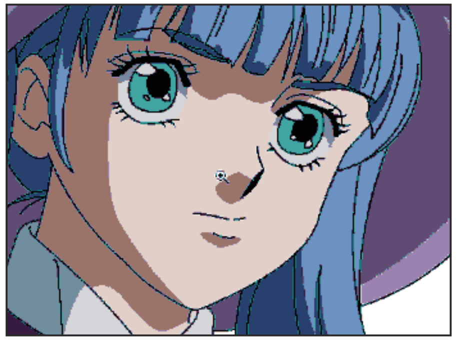
POINT

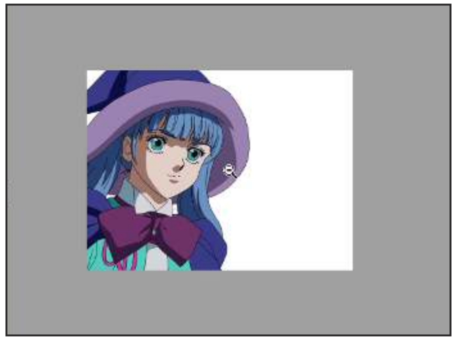
About the layer structure of images

When an image is saved by CoreRETAS HD using overwriting, the layer structure will be lost.

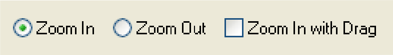
Zooming in and zooming out: zoom tool

By clicking on the part of the [Image View] area that is to be enlarged, the image will be shown enlarged. By clicking the tool twice in succession, the actual pixel size will be set. Further, clicking the button while pressing the [Alt/Opt] key will realize Zoom Out. Pressing [Ctrl] while dragging will realize the Hand tool.


[Zoom In View]


[Zoom Out View]

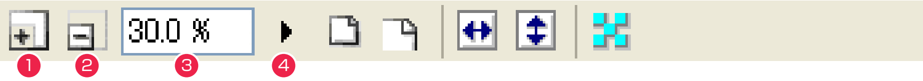
Tool options


◉ Zoom In ○ Zoom Out ☐ Zoom In with Drag

- [Zoom In]
  Enlarges the screen view. (Press [Alt/Opt] + [+] for Zoom Out).
- [Zoom Out]
  Reduces the screen view. (Press [Alt/Opt] + [-] for Zoom Out).
- [Zoom In with Drag]
  By selecting the area to be enlarged by dragging the mouse, the selected area will be enlarged when the mouse is released.

Zooming in and zooming out: tool bar

Allows adjustment of the screen view.


30.0 %

① [Zoom In]
Enlarges the screen view with each click.

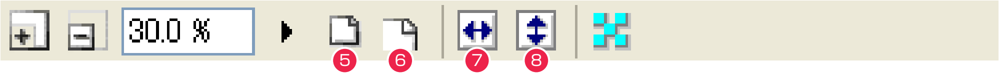
② [Zoom Out]
Reduces the screen view with each click.

③ [Scale] (Numerical Input)
Allows the screen view scale to be input as a numerical value.

④ [Scale] (Slider)
Click to show a slider that can be dragged up and down to adjust the screen view scale.

Screen view adjustment: tool bar

Allows adjustment of the screen view.

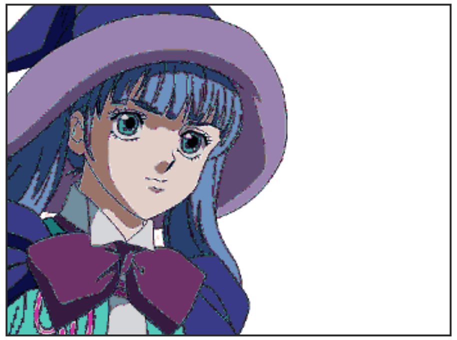


⑤ [Fit on Screen]
Adjusts the screen view so that the whole image is shown in the [Image View] area.

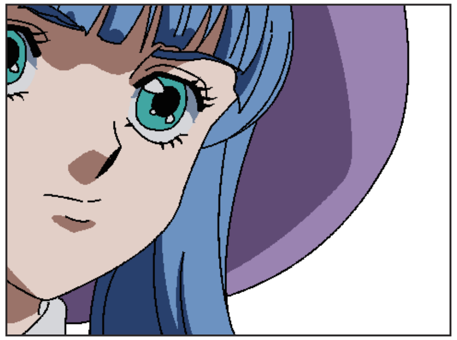
⑥ [Actual Pixels]
The image pixels and the [Image View] area screen pixels are shown at the same 1:1 size.

⑦ [Flip Horizontal]

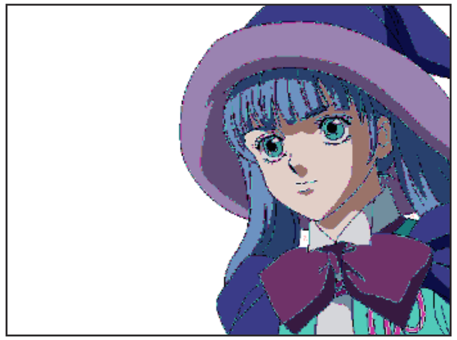
⑧ [Flip Vertical]
Allows flipping of the screen view.



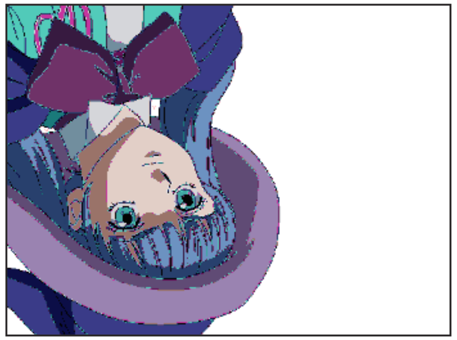
[Fit on Screen]



[Actual Pixels]



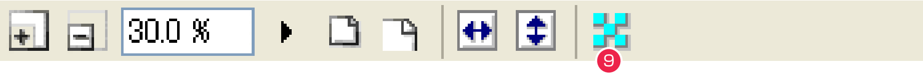
[Flip Horizontal]



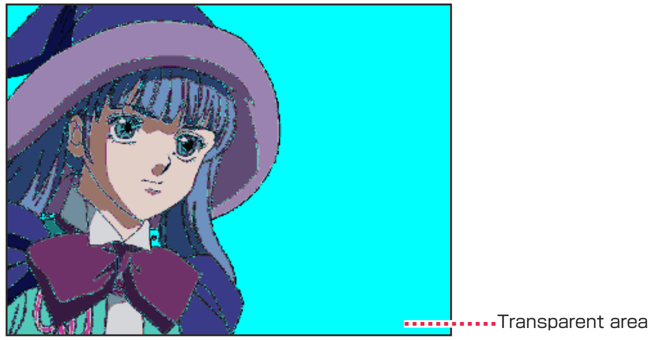
[Flip Vertical]

Showing transparent areas: tool bar

Allows adjustment of the screen view.

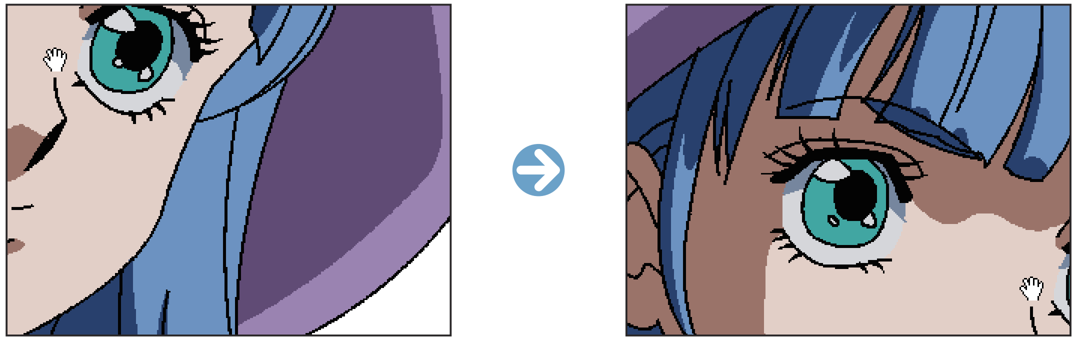


⑨ [Show Transparent Area]
Shows transparent areas in light blue.



Moving the screen view: hand tool

By dragging the hand tool over the [Image Area], it is possible to move the screen view. Clicking two times in succession will set the image to the center.

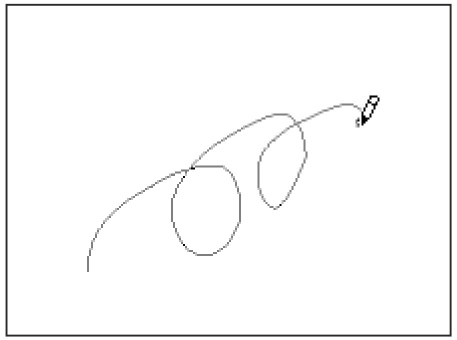


* There are no tool options.

Single-dot drawing: pencil tool

Allows drawing with a 1-dot size using the [Foreground Color]. Clicking will create dots, while dragging will draw lines. This tool is appropriate for making fine revisions.

* There are no tool options.

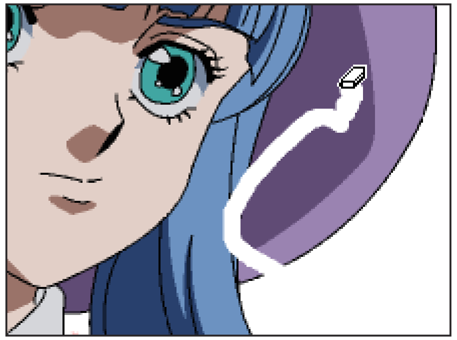


Auto erase function

In the [Pencil] tool, if drawing is started from a part in which the [Foreground Color] has already been drawn, this tool will delete the line instead of drawing a line. This function means that it will be possible to carry out erasing work without having to change to the [Eraser] tool. The same condition will be maintained during dragging. The function will be set to off while the [Shift] key is being pressed, so that it will be possible to draw the line as usual.

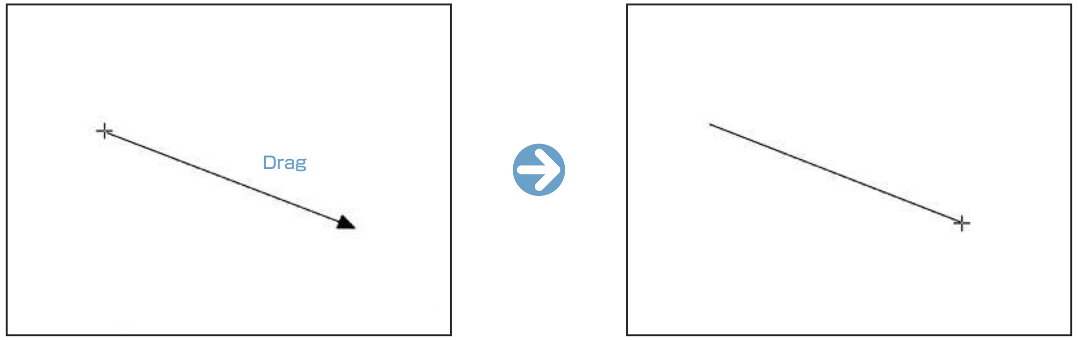
Deleting a line: eraser tool

By selecting the eraser tool and dragging it, it will be possible to erase the lines that have been drawn.



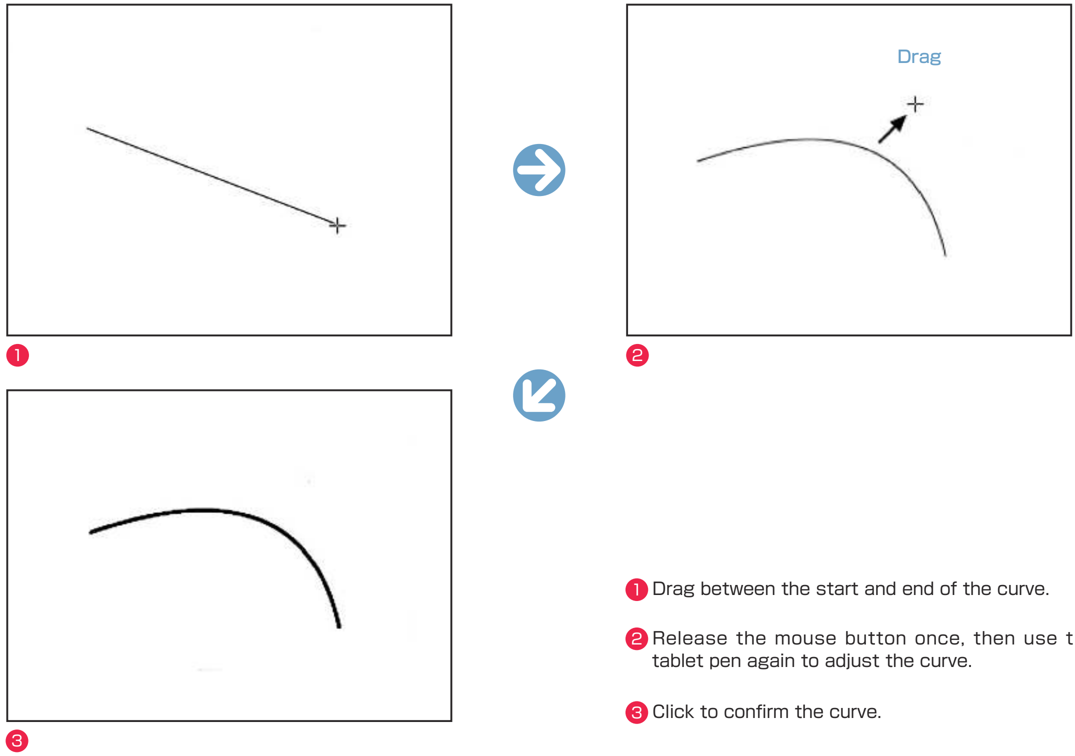
Drawing shapes: line tool

Dragging from the start point to the end point will extend a straight line between the points. When the mouse button is released, the line will be confirmed (If the [Shift] key is pressed while drawing the line, the angle of the line will snap to the nearest 45°).



Drawing shapes: curve tool

Allows drawing of a curve (If the [Shift] key is pressed while drawing the curve, the angle of the curve will snap to the nearest 45°).



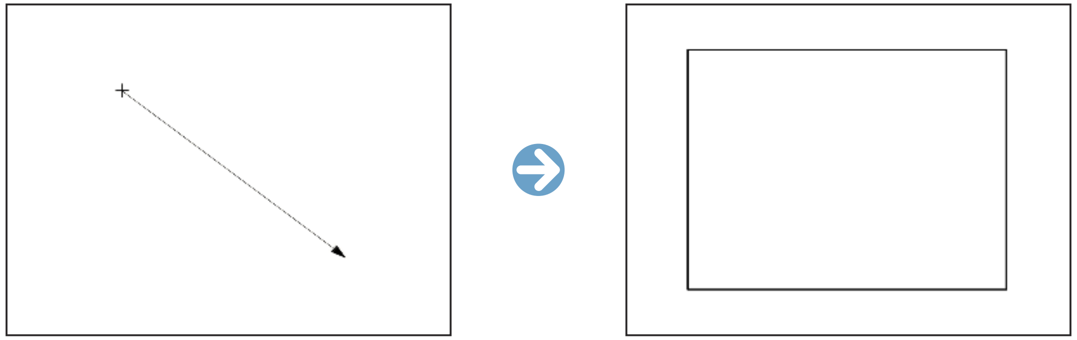
① Drag between the start and end of the curve.

② Release the mouse button once, then use the mouse or tablet pen again to adjust the curve.

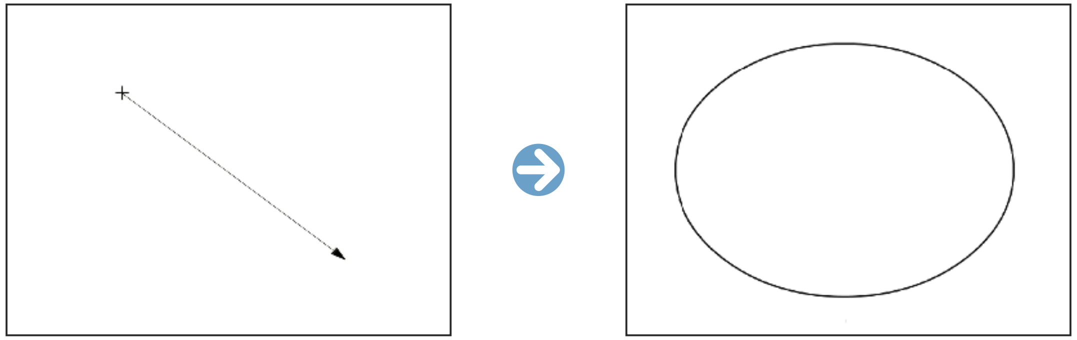
③ Click to confirm the curve.

Drawing shapes: shape tool

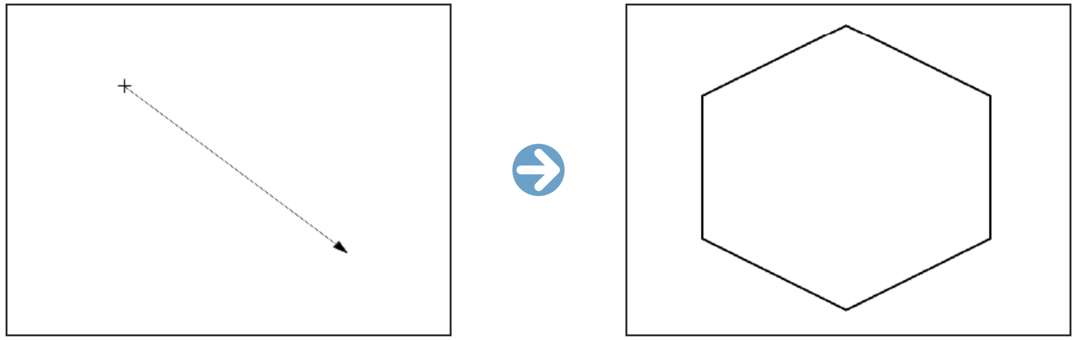
Allows drawing of a rectangle, ellipse or polygon by dragging between the start and finish points. Releasing the mouse button will confirm the shape. If the [Shift] key is pressed while drawing, the angle of the line will snap to the nearest 45°.



[Rectangle] (Pressing [Shift] will fix a square).



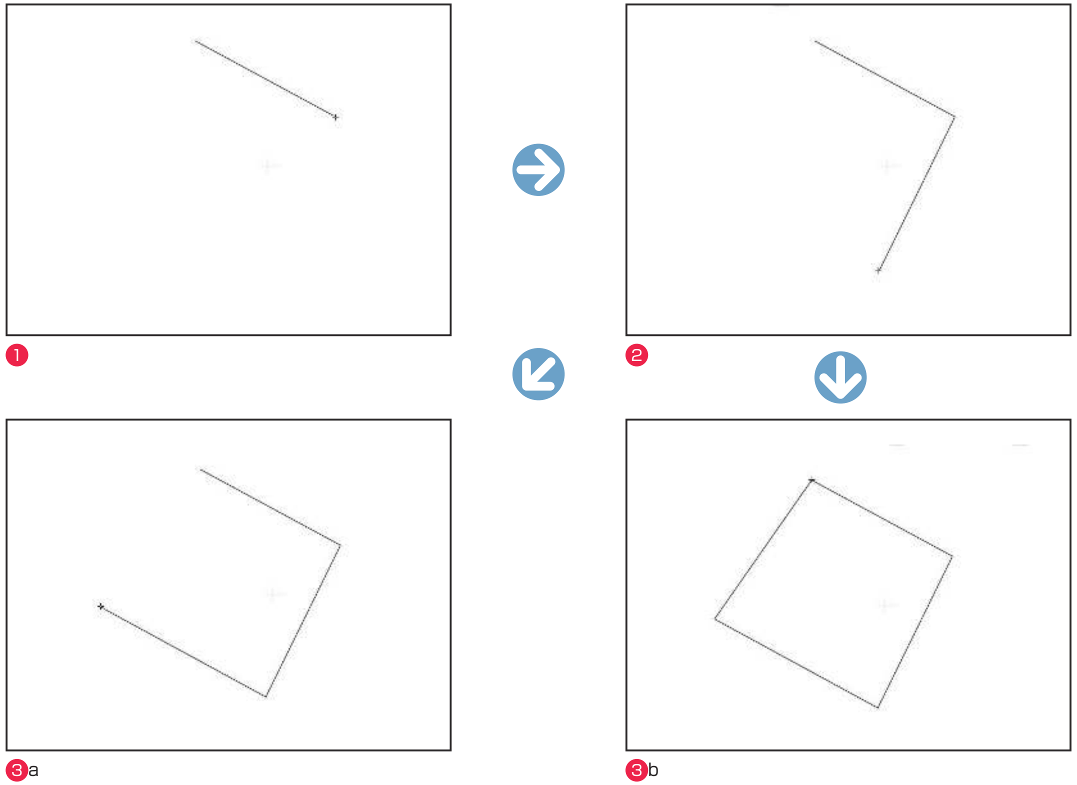
[Ellipse] (Pressing [Shift] will fix a circle).



[Polygon] (Pressing [Shift] will fix a regular polygon).

Drawing shapes: polyline tool

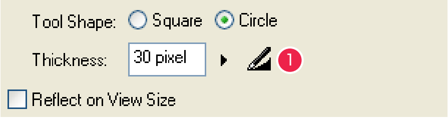
Allows drawing of a polyline shape by repeatedly clicking on points from the start to finish. If the [Shift] key is pressed while drawing, the polyline angles will snap to the nearest 45°.



① Click on the starting point, then click on the next point to draw a line.
② Continue by clicking on the next points to draw further lines.
③ a Double click to confirm the shape and finish drawing.
③ b When the [Connect Start and End Points] tool option is set to "On", the end point will be linked to the start point.

Drawing tool options

[Eraser] tool options

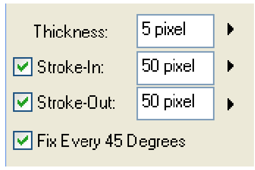


Tool Shape: ○ Square ● Circle

Thickness: 30 pixel ❶

☐ Reflect on View Size

[Line], [Curve] tool options



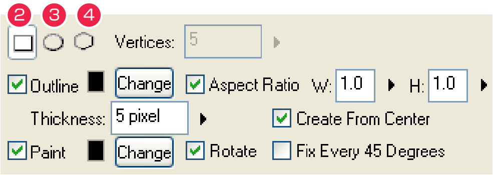
Thickness: 5 pixel

☑ Stroke-In: 50 pixel

☑ Stroke-Out: 50 pixel

☑ Fix Every 45 Degrees

[Shape] tool options



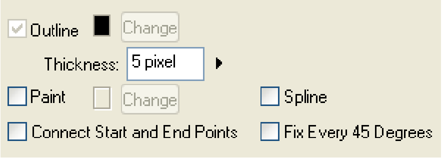
❷ ❸ ❹ Vertices: 5

☑ Outline Change ☑ Aspect Ratio W: 1.0 H: 1.0

Thickness: 5 pixel ☑ Create From Center

☑ Paint Change ☑ Rotate ☐ Fix Every 45 Degrees

[Polyline] tool options



☑ Outline Change

Thickness: 5 pixel

☐ Paint ☐ Change ☐ Spline

☐ Connect Start and End Points ☐ Fix Every 45 Degrees

- [Tool Shape]
  Allows selection between [Square] and [Circle].
- [Line Width]
  Sets the tool width.

❶ [Reflect Pen Pressure on Line Thickness]
During tablet pen input, the pen pressure will affect the line thickness.

- [Reflect on View Size]
  Reflects the screen size in the cursor.

❷ [Rectangle]
Sets the drawing shape to [Rectangle].

❸ [Ellipse]
Sets the drawing shape to [Ellipse].

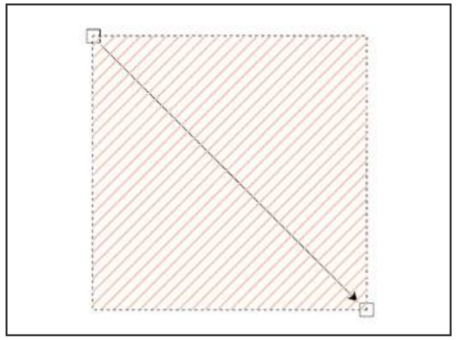
❹ [Polygon]
Sets the drawing shape to [Polygon].

- [Vertices]
  When [Polygon] is selected, allows selection of the number of vertices of the shape drawn.

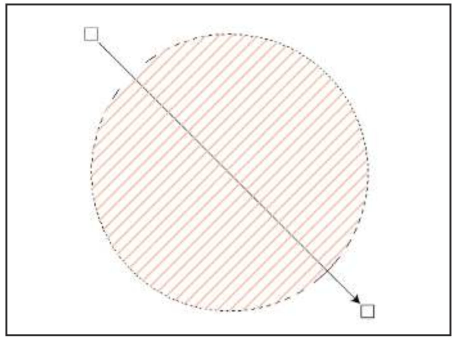
- [Stroke-In]
  Adds a [Stroke-In] to the beginning of a line.
- [Stroke-Out]
  Adds a [Stroke-Out] to the end of a line.
- [Outline]
  Allows setting of the [Foreground Color] and [Thickness] of a shape outline. By pressing the [Change] button, the outline [Foreground Color] can be changed to the color that has been set using the [Foreground Color] button.
- [Paint]
  Allows filling inside shapes and setting the [Foreground Color] during drawing. By pressing the [Change] button, the filling [Foreground Color] can be changed to the color that has been set using the [Foreground Color] button.
- [Aspect Ratio]
  Allows setting of the ratio of [Height] to [Width] of the shape drawn.
- [Create From Center]
  Allows the shape to be drawn from the center.
- [Rotate]
  Allows the shape to be rotated immediately after drawing. Click to confirm the shape after rotation.
- [Spline]
  Allows linking of a clicked point to the next point using a Bezier curve.
- [Connect Start and End Points]
  When drawing, double-clicking on the end point will connect the end point to the start point.
- [Fix Every 45 Degrees]
  Allows fixing of the shape every 45°.

Selection: rectangle selection tool

Allows selection of the shape defined by the diagonal between the start and end points.
Allows selection of [Rectangle] and [Ellipse] shapes using the tool options.



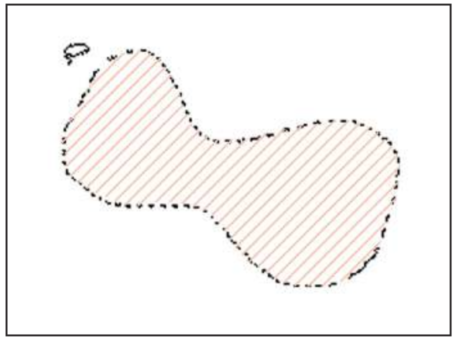
[Rectangle]



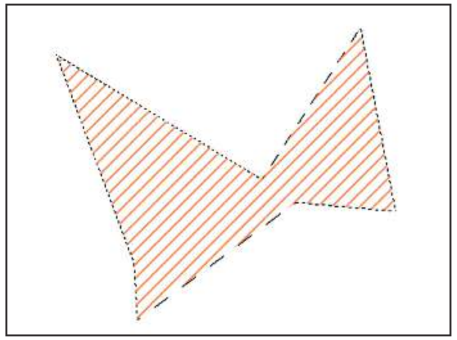
[Ellipse]

Selection: lasso tool

From the starting point that is the point first clicked, the area enclosed by freely moving the cursor will become the selection. Allows selection of [Lasso] or [Polyline] shapes using the tool options.



[Lasso]



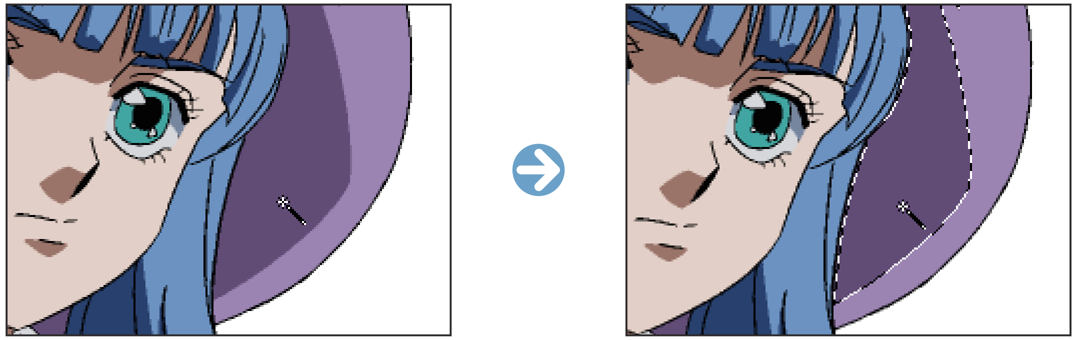
[Polyline]

- [Lasso]
  The area enclosed by the shape freely drawn by dragging the mouse will become the selection. The point where the shape drawing is stopped will be joined to the starting point by a straight line to make the selection.

- [Polyline]
  The area enclosed by the shape formed by moving the mouse and clicking to create apexes that return to the starting point will become the selection. Double-clicking while drawing the shape will join the position to the starting point with a straight line to make the selection.

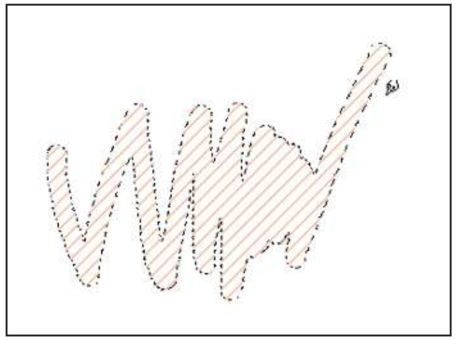
Selection: magic wand tool

Allows selection of all connected parts having the same color as the pixel that was clicked.



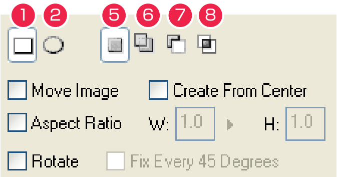
Selection: selection brush tool

The area traced by the pen-type fingertip pointer will become the selection.



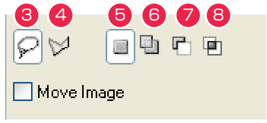
Selection tool options

[Rectangle Selection] tool options



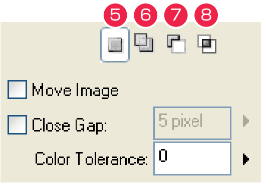
☐ Move Image ☐ Create From Center
☐ Aspect Ratio W: 1.0 H: 1.0
☐ Rotate ☐ Fix Every 45 Degrees

[Lasso] tool options



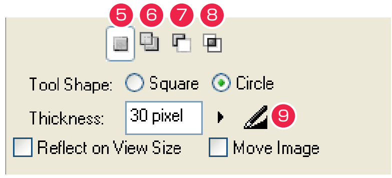
☐ Move Image

[Magic Wand] tool options



☐ Move Image
☐ Close Gap: 5 pixel
Color Tolerance: 0

[Selection Brush] tool options



Tool Shape: ○ Square ● Circle
Thickness: 30 pixel
☐ Reflect on View Size ☐ Move Image

① [Rectangle]
Sets the selection shape to [Rectangle].

② [Ellipse]
Sets the selection shape to [Ellipse].

③ [Lasso]
Sets the selection shape to [Lasso].

④ [Polyline]
Sets the selection shape to [Polyline].

⑤ [New Selection]
Creates a new selection, and deletes the previous selection (Default Setting).

⑥ [Add to Selection]
Adds a new selection to an existing selection. When the selection overlaps an already selected area, a joined selection will be created.
Even when other tool options are selected, during the time that the [Shift] key is pressed, this mode will be selected.

⑦ [Subtract from Selection]
When making a new selection that overlaps an existing selection, the overlapped part will be deleted from the existing selection.
Even when other tool options are selected, while the [Alt/Opt] key is pressed, this mode will be selected.

⑧ [Intersect with Selection]
When making a new selection that overlaps an existing selection, only the overlapped part will remain as the selection.
Even when other tool options are selected, while the [Alt/Opt] + [Shift] keys are pressed, this mode will be selected.

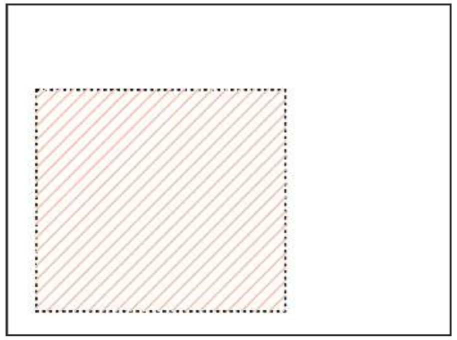
- [Tool Shape]
  Allows selection of the tool shape from [Square] and [Circle].
- [Thickness]
  Sets the thickness of the tracing line.

⑨ [Reflect Pen Pressure on Line Thickness]
During tablet pen input, the pen pressure will affect the line thickness.

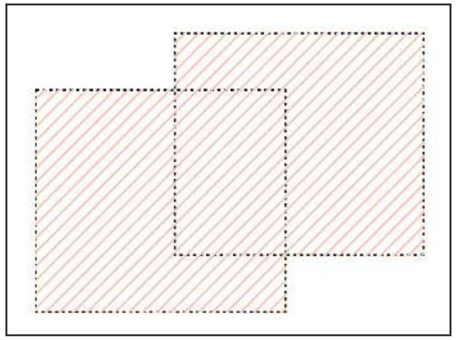
- [Reflect on View Size]
  Even when the screen is zoomed in or zoomed out, maintains the same size as in 100% view.

- [Move Image]
  When dragging to move the selection, the selected image will also move.
- [Create From Center]
  Although the default setting is for the starting point to be at top left, when this check box is "On", the starting point will be from the center.
- [Aspect Ratio]
  Sets the size ratio of vertical to horizontal for the rectangles and ellipses that are drawn.
- [Rotate]
  After confirming the size, allows the shape to be rotated according to the mouse movement. Clicking at the desired position will create the selection.
- [Fix Every 45 Degrees]
  Allows fixing of the selection every 45°.

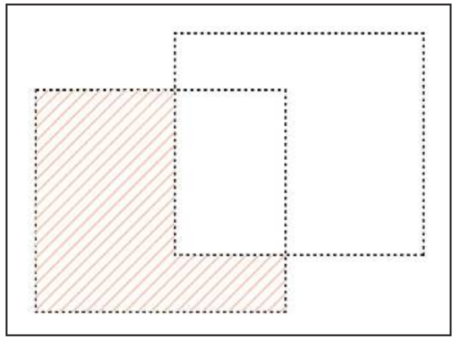
- [Close Gap]
  When conducting filling of a closed area, gaps smaller than the specified width will be ignored.
- [Color Tolerance]
  Higher numbers selected will have a wider range of tolerance for selecting colors considered to be the same.



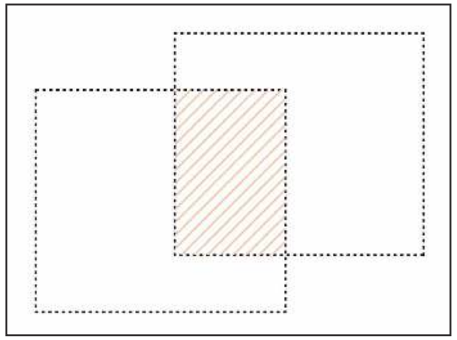
[New Selection]



[Add to Selection]

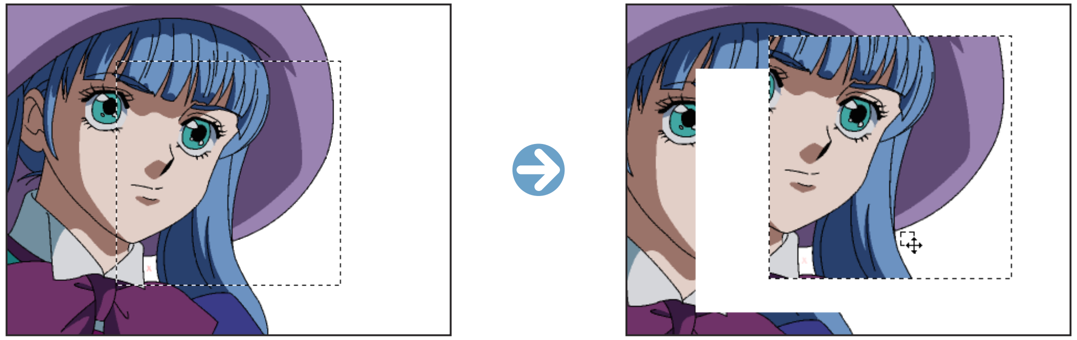


[Subtract from Selection]

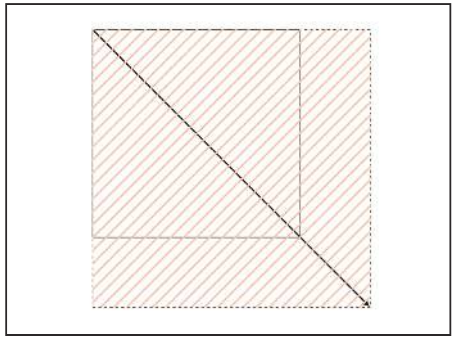


[Intersect with Selection]

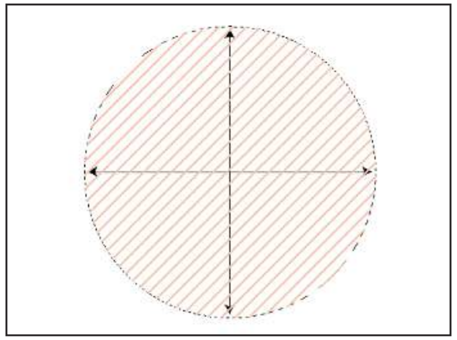
* The shaded part will be the selection.



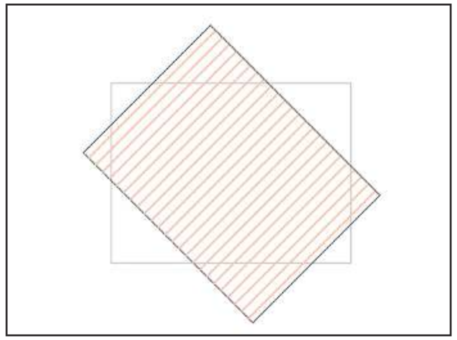
[Move Image]



[Aspect Ratio]



[Create From Center]



[Rotate]

Selecting the foreground color

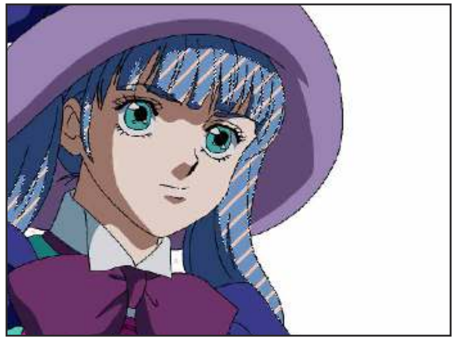
Selects all the parts drawn using the current foreground color. By selecting [Select Foreground Color] from the [Edit] menu, the [Foreground Color] parts shown in the [Drawing View] area will be the selection.

Selecting other than foreground color

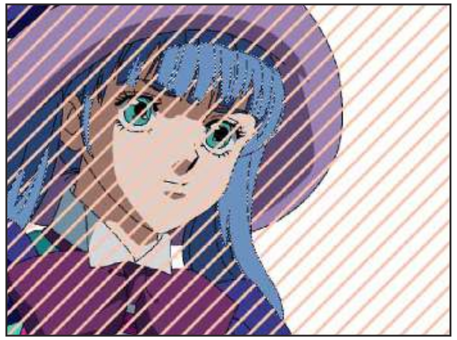
Selects all the parts except for parts drawn using the current foreground color. By selecting [Select Other than Foreground Color] from the [Edit] menu, the [Foreground Color] parts shown in the [Drawing View] area will be the selection.

Adding foreground color to selection

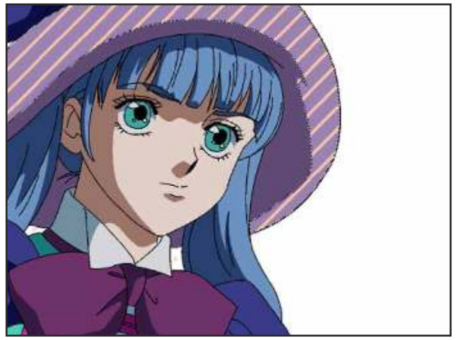
Adds all the parts drawn using the current foreground color to the selection. By selecting [Add Foreground Color to Selection] from the [Edit] menu, the [Foreground Color] parts shown in the [Drawing View] area will be the selection.



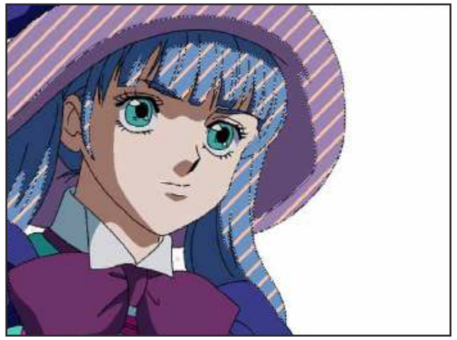
[Select Foreground Color]
The character`s blue hair is selected.



[Select Other than Foreground Color]
Everything is selected except for the character`s blue hair.



[Add Foreground Color to Selection]
The bright part of the character`s hat is added to the selection.
(The current foreground color is the character`s blue hair).



The bright part of the character`s hat and the character`s hair become the selection.

Selecting out-of-range color

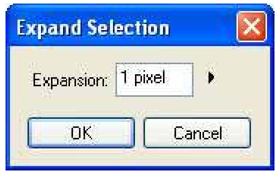
Selects a color range other than NTSC standard.

Expanding the selection

Expands the existing selection by a specified width. By selecting [Expand Selection...] from the [Edit] menu, a dialog box will be shown. Specifying the [Expansion] and pressing [OK] will expand the selection.

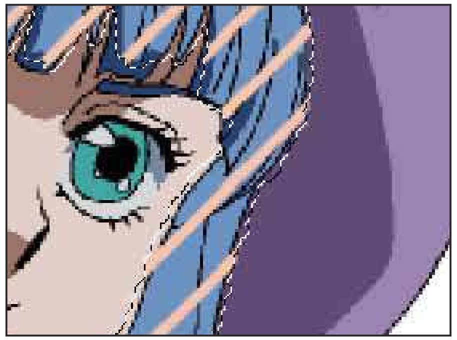
Reducing the selection

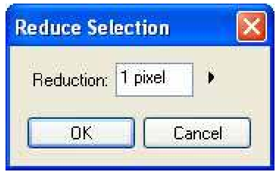
Reduces the existing selection by a specified width. By selecting [Reduce Selection...] from the [Edit] menu, a dialog box will be shown. Specifying the [Reduction] and pressing [OK] will reduce the selection.



Expansion: 1 pixel

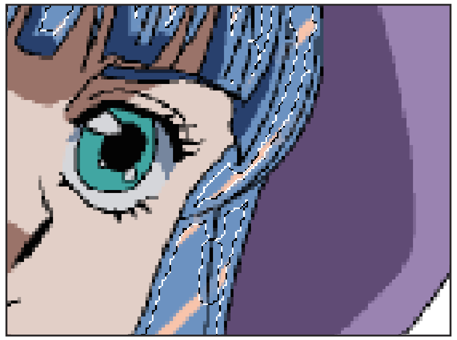
[Expanding the Selection]





Reduction: 1 pixel

[Reducing the Selection]



Selecting all

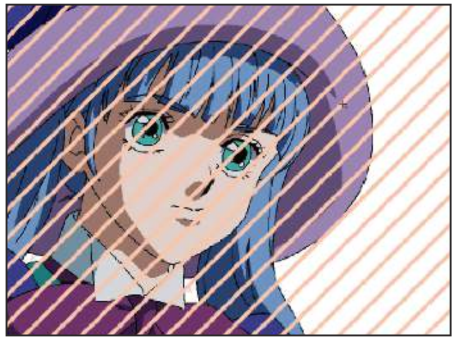
Selects the complete image. By selecting [Select All] from the [Edit] menu, the whole [Drawing View] area will be selected.

Reversing a selection

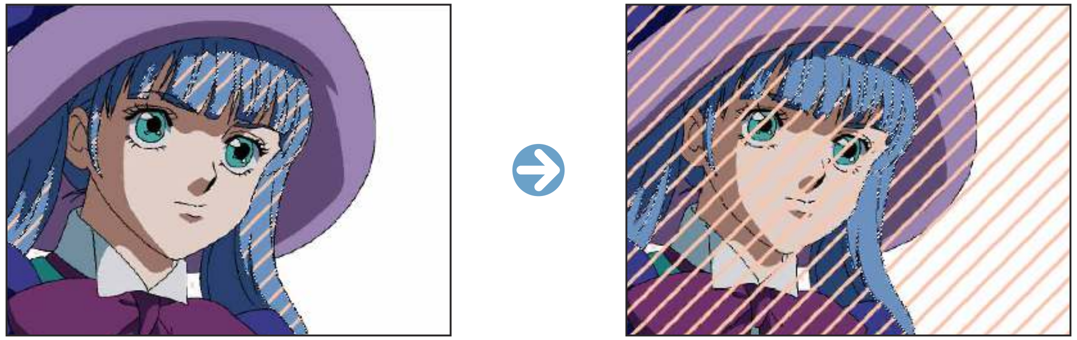
Reverses the selection. By selecting [Reverse Selection] from the [Edit] menu, the parts that are not currently selected will become the selection, and conversely, the currently selected area will be deselected.

Clearing a selection

Clears the selection. By selecting [Clear] from the [Edit] menu, the currently selected area will become invalid, and no areas will be in the selected condition.



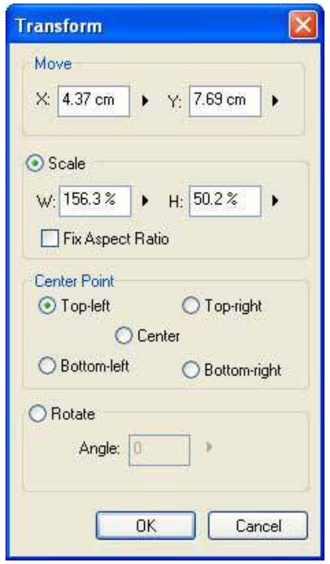
[Select All]



[Reverse Selection]

Transforming an image

This transforms image data in the selection. By selecting [Transform] -> [Scale...] or [Rotate...] from the [Edit] menu, the currently selected area will be transformed. It will also be possible to input numerical values to the dialog box.



Transform

Move

X: 4.37 cm Y: 7.69 cm

● Scale

W: 156.3 % H: 50.2 %

☐ Fix Aspect Ratio

Center Point

● Top-left ○ Top-right

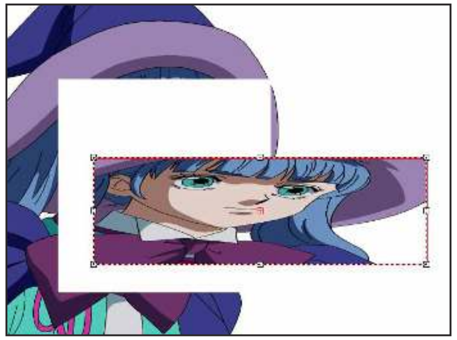
○ Center

○ Bottom-left ○ Bottom-right

○ Rotate

Angle: 0

OK Cancel



[Transform] Dialog Box

- [Move]
  Allows specification of the movement horizontal direction position (X) and the vertical direction position (Y).
- [Scale]
  Allows setting of the maximum ratio of [W] (width) and [H] (height) as a percentage.
- [Fix Aspect Ratio]
  When this check box is "On", the width and height values are linked, so that the size can be changed while maintaining the specified aspect ratio.
- [Center Point]
  Allows the center point during the transformation to be selected from [Top-Left], [Top-Right], [Center], [Bottom-Left], and [Bottom-Right].
- [Rotate]
  Allows specification of the rotation angle.

Flipping horizontally

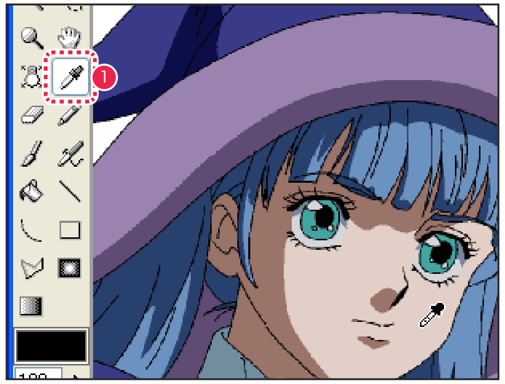
Flips the selection horizontally. Select using [Transform] -> [Flip Horizontal] from the [Edit] menu.

Flipping vertically

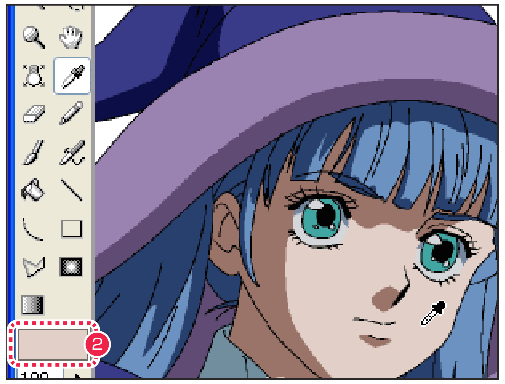
Flips the selection vertically. Select using [Transform] -> [Flip Vertical] from the [Edit] menu.

Painting: eyedropper tool

This tool sets the foreground color to the same color as the clicked location.
The color picked using the [Eyedropper] tool will be set as the [Foreground Color] in the [Foreground Color] button.



❶ Picking the color using the [Eyedropper] tool.

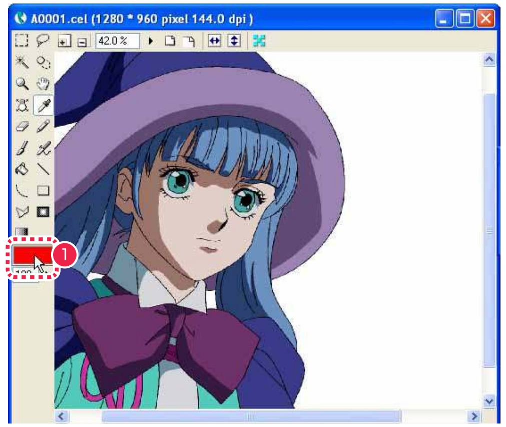


❷ The picked color is set as the [Foreground Color] button.

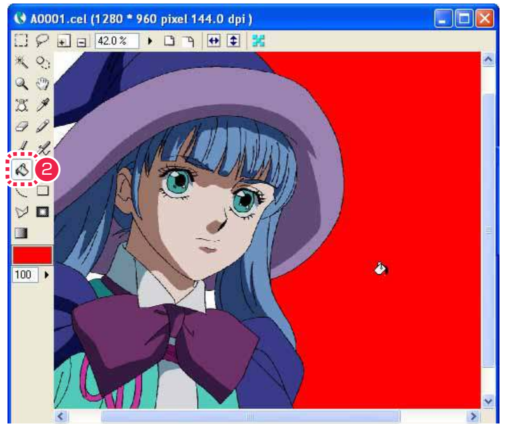
* There are no tool options.

Painting: fill tool

Replaces the color in an enclosed area containing the clicked pixel color by painting with the foreground color.

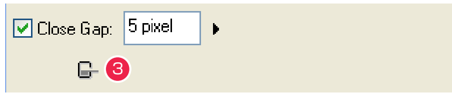


❶ Click the [Foreground Color] button and select the color using the [Color Settings] dialog box.



❷ Select the [Fill] tool and click the image view area to replace the color.

Tool options



☑ Close Gap: 5 pixel

- [Close Gap]
  Implement filling while ignoring gaps within the specified width.

❸ [Stop at Paint Overflow]
When implementing fill, automatically stop the operation when color overflow is detected.

Fill (menu)

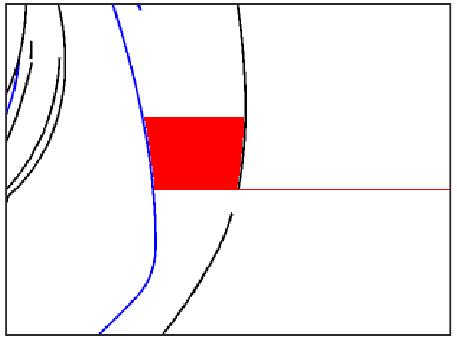
Fills the selection enclosed area with the foreground color. The usage method is the same as for the [Fill] tool.
Selected using [Fill] from the [Edit] menu.

Stop at paint overflow

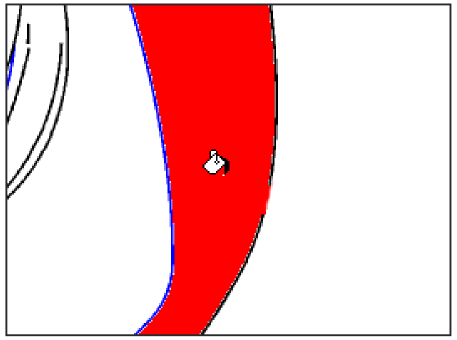
If the check boxes of [Close Gap] or [Stop at Paint Overflow] in the [Fill] tool option palette are set to "On", it will be possible to prevent to overflow of the color from small gaps in the enclosing lines.

Close gap

Gaps that are close to the specified number of pixels set using numerical input or the slider will be considered as being closed and the enclosed area will be filled.



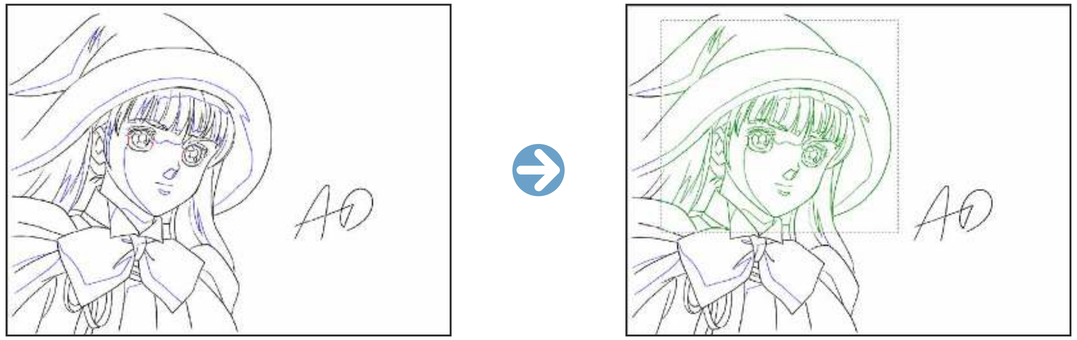
[Stop at Paint Overflow]



[Close Gap]

Painting: replacing line color (menu)

The colors of foreground color parts inside the selected area (excluding transparent parts) will be replaced by the color specified by the [Foreground Color] button.
Select using [Replace Line Color] from the [Edit] menu.



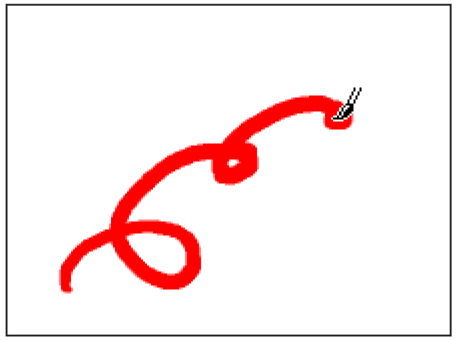
POINT

Close gap

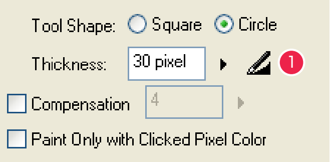
Take care that if [Close Gap] is always set to "On", narrow areas may frequently not be filled.

Painting: brush tool

Dragging will allow painting as though using a brush.



Tool options



Tool Shape: ○ Square ● Circle
Thickness: 30 pixel ❶
☐ Compensation 4
☐ Paint Only with Clicked Pixel Color

- [Tool Shape]
  Allows selection of the brush tip shape from [Square] or [Circle].
- [Thickness]
  Allows setting of the brush line thickness.
- [Compensation]
  Applies compensation to smooth the lines drawn.
- [Paint Only with Clicked Pixel Color]
  Paints only using the color of the pixel that was clicked. This is useful as a partial color replacement.

❶ [Reflect Pen Pressure on Line Thickness]
Reflects the brush pressure in the line thickness when drawing with a tablet pen.

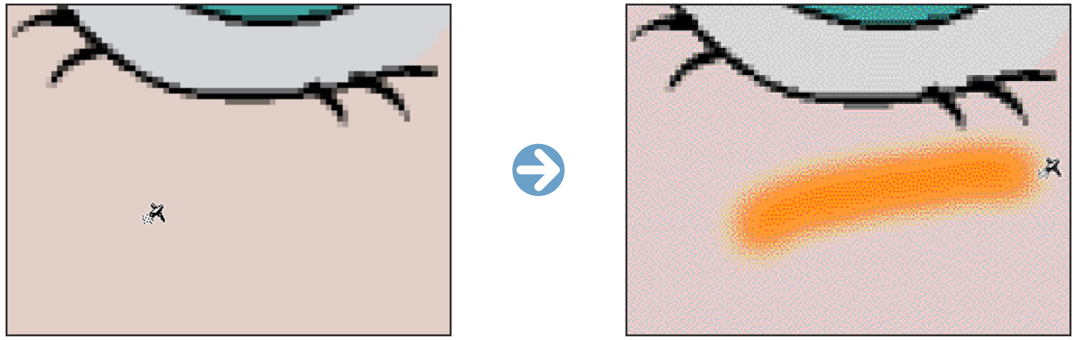
POINT

Paint only with clicked pixel color

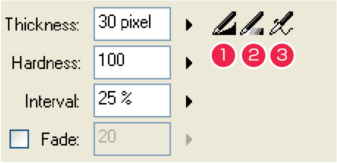
[Paint Only with Clicked Pixel Color] is included in the PaintMan Ver.5 [Brush 2] tool.

Effects: airbrush tool

Airbrush-like drawing can be carried out.



Tool options



Thickness: 30 pixel
Hardness: 100
Interval: 25 %
☐ Fade: 20
① ② ③

- [Thickness]
  Sets the thickness of the sprayed line.
- [Hardness]
  Sets the strength of the sprayed line.
- [Interval]
  Sets the interval between each spray of the airbrush.
- [Fade]
  Draws lines that fade out gradually.

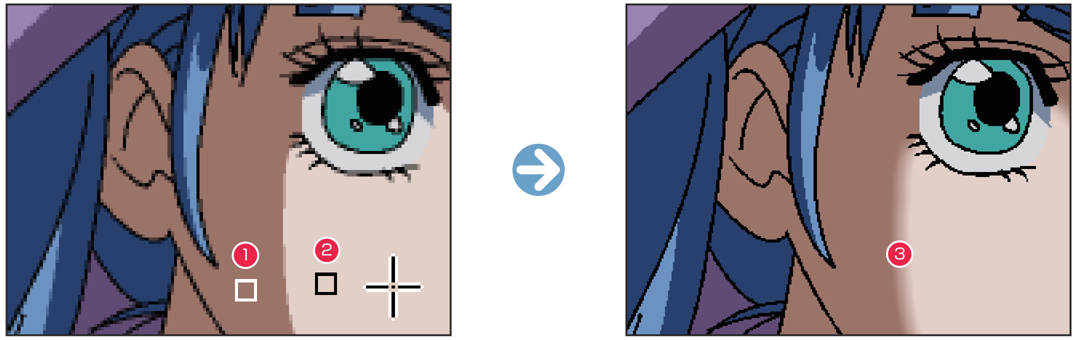
① [Reflect Pen Pressure on Line Thickness]
Reflects the pen pressure in the line thickness when drawing with a tablet pen.

② [Reflect Pen Pressure on Opacity]
Reflects the pen pressure in the line opacity when drawing with a tablet pen.

③ [Enable Auto Spray]
Allows spraying to be carried out continuously during dragging, even when the mouse is not being moved.

Effects: airbrush effect tool

For the border between several colors specified by clicking, applies a gradient that appears to have been sprayed using the airbrush.

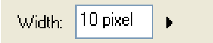


① Click the first color area.

② Double-click after passing over the boundary to the next color.

③ Gradient processing will be applied uniformly to the boundary.

Tool options



Width: 10 pixel

- [Width]
  Sets the [Width] of the airbrush effect that will be applied to the color boundary.

Airbrush effect (menu)

For the boundary between two colors in the selection, allows application of a gradient that appears to have been sprayed using the airbrush. The width of the gradient can be set in the tool option of the [Airbrush Effect] tool. Select using [Airbrush Effect] in the [Edit] menu.

POINT

Difference between airbrush effect and blurring

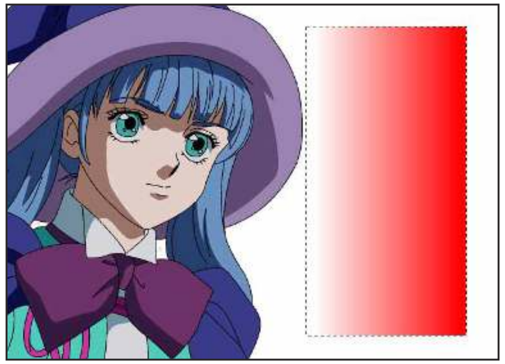
The [Airbrush Effect] function automatically detects the boundary between the specified colors and applies the gradient only to the boundary part. While only the boundary part is processed in the airbrush effect, in normal blur processing the blur is applied overall without recognizing specific colors, so the same effect can not be realized.

Effect of airbrush effect

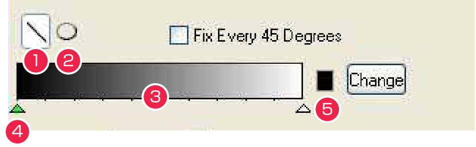
The [Airbrush Effect] can be used even when a selection has not been created. In this case, the effect will be applied to the whole image.

Effects: gradient tool

Allows drawing of a gradient that includes transparent parts that may have three or more colors. Further, in addition to line gradients, it will also be possible to draw radial-type gradients.



Tool options



① [Line] button
Gradient will be applied according to the dragged line.

② [Ellipse] button
Gradient will be applied radially according to the elliptical area formed by dragging.

- [Fix Every 45 Degrees]
Shape will be fixed to nearest 45°.

③ Gradient Scale
By moving the positions of the pointers allocated to each selected color, the generated gradient can be adjusted. Clicking on an area below the scale where there are no pointers will create a new pointer, and it will be possible to create gradients that use several colors. Pointer positions can be adjusted by dragging to the right and left, and pointers are deleted by dragging them up or down until they are outside the [Gradient] tool options area.

④ Pointer
The currently selected pointer is shown in green.

⑤ Gradient [Foreground Color] view and [Change] button
Allows setting of the filling color inside shapes during drawing and the [Foreground Color]. Pressing the [Change] button sets the color at the pointer location to the color that is set in the [Foreground Color] button.

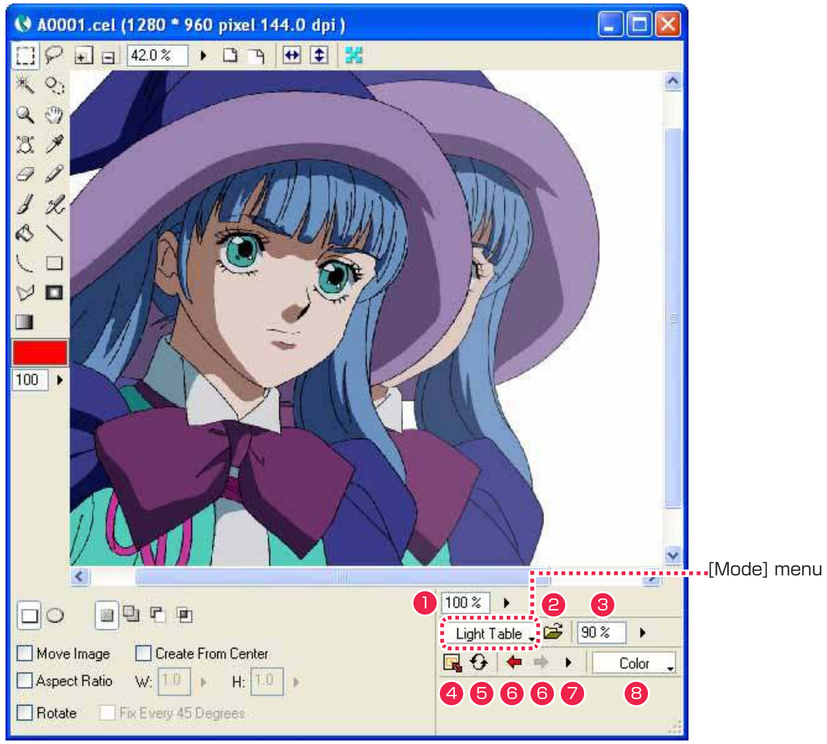
POINT

Situation where several gradients are to be created, and when partial gradients are to be applied

When several gradients are to be created, or partial gradients are to be applied, the selection areas should be specified.

Cel window (light table mode)

Clicking the [Mode] menu will switch to the light table mode.



A0001.cel (1280 * 960 pixel 144.0 dpi)

① [Opacity] button
Adjusts the opacity of the editing image in [Normal Mode].

② [Load Image File to Light Table...] button
Allows selection of layer, cel bank, or image file as the image for loading to the light table.

③ [Light Table Opacity] menu
Adjusts the opacity of the currently selected image loaded in the light table.

④ [Set Position...] button
Allows detailed setting of the view position of the image in the [Image View] area using the [Light Table Set Position] dialog box.

⑤ [Refresh] button
Re-loads the original image loaded in the light table, and refreshes the image.

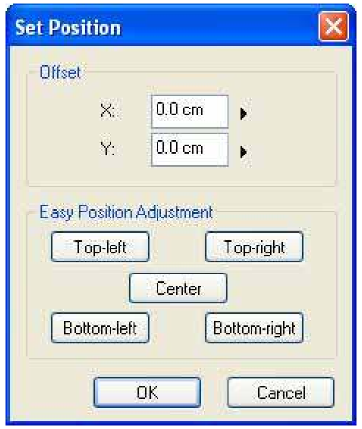
⑥ [Previous Cel] button/ [Next Cel] button
When using cel layer (cel folder) cel images or rendering images on the light table, shows the previous cel ([Previous Cel] button), or next cel ([Next Cel] button).

⑦ [Cel List] button
Lists the cels in a pull-down menu to allow selection of optional cels, and shows which cels have been selected.

⑧ [Display Mode] pull-down menu
Allows selection of the display mode of the image loaded in the light table between [Color], [Monotone], and [Halftones].

Light table set position dialog box

Displayed by pressing the [Set Position...] button in the [Image Editing] window.


Set Position

Offset

X: 0.0 cm

Y: 0.0 cm

Easy Position Adjustment
Top-left
Top-right
Center
Bottom-left
Bottom-right
OK
Cancel

[Offset]
Allows position specification in the horizontal and vertical directions by numerical input.

[Easy Position Adjustment]
By clicking each button, adjustment is made to that position.

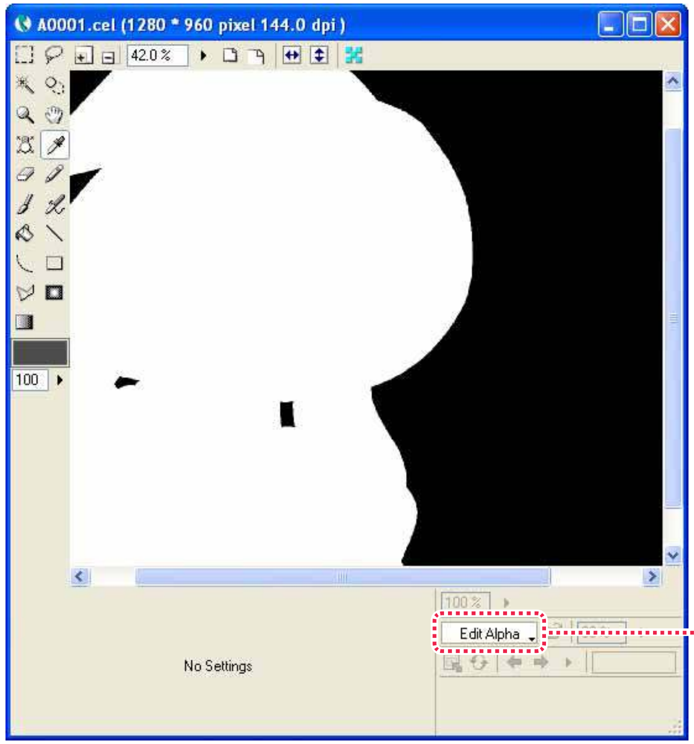
Light table tool

Dragging the image in [Preview] will allow the loaded image to be moved.

* There are no tool options.

Cel window (alpha edit mode)

Clicking the [Mode] menu will switch to the alpha edit mode.
Editing of the image transparency and the mask can be carried out.


A0001.cel (1280 * 960 pixel 144.0 dpi)
42.0 %
100
100 %
Edit Alpha
No Settings

[Mode] menu

Chapter

6

Application description: output

In this chapter, the preview and rendering methods in CoreRETAS HD are introduced.

Step:01 Preview using still images
Step:02 Preview using movie images
Step:03 Export
Step:04 Batch export of a number of scenes
Step:05 Flash format export

Step: 01

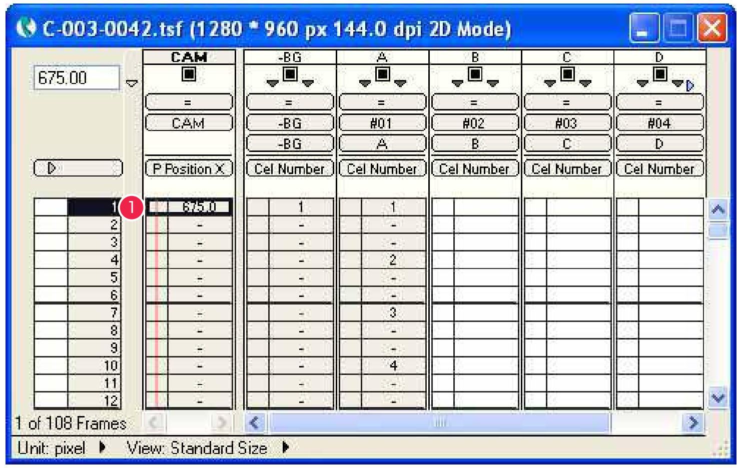
Preview using still images

In this step, an explanation is given of the preview method using still images in the [Rendering] window.

Preview by rendering of the current frame

1. Selecting the frame for preview

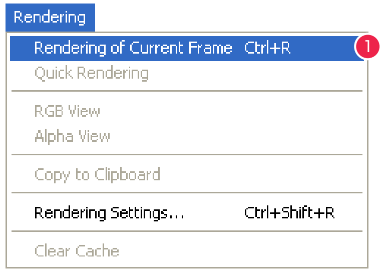
Select the scene folder using the [File Browser], and open the [X-sheet].


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
675.00
CAM
-BG
A
B
C
D
#01
#02
#03
#04
P Position X
Cel Number
675.0
①
1 of 108 Frames
Unit: pixel
View: Standard Size

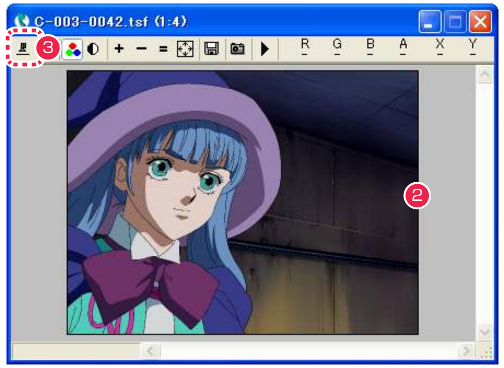
① Select the frame for preview on the X-sheet.

2. Applying the command

Select the [Rendering of Current Frame] from the [Rendering] menu to view the [Rendering] window and apply preview.


Rendering
Rendering of Current Frame Ctrl+R
①
Quick Rendering
RGB View
Alpha View
Copy to Clipboard
Rendering Settings... Ctrl+Shift+R
Clear Cache

① Select the [Rendering of Current Frame].


C-003-0042.tsf (1:4)
③
R G B A X Y
②

② The preview of the still image is displayed.

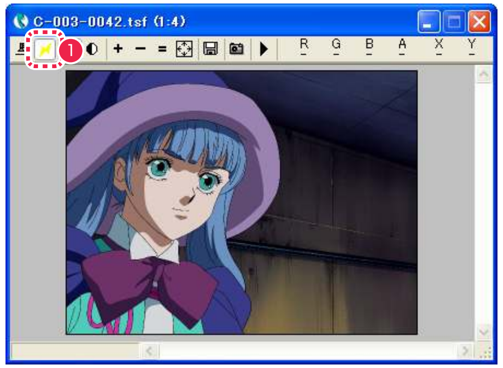
③ The [Rendering] button in the [Rendering] window can also be clicked to obtain the same result.
Furthermore, the [Frame number display] area in the X-sheet can be double-clicked to preview.

Preview using quick rendering

Quick rendering is a function of automatic rendering when a frame is moved or sheet edited.

1. Selecting quick rendering

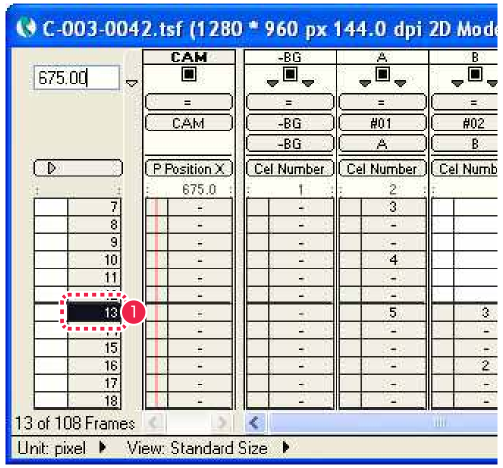
Select the [Quick Rendering] button on the [Rendering] window.
The [Quick Rendering] command can also be applied from the [Rendering] menu.


C-003-0042.tsf (1:4)
①
R G B A X Y

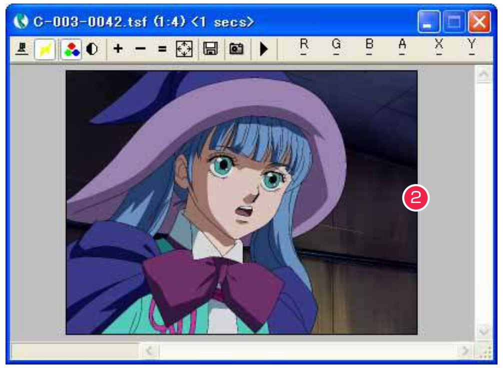
① Press the [Quick Rendering] button to turn it ON.

2. Applying quick rendering

The frame selected in the X-sheet or the [Stage] window is immediately rendered and displayed in the [Rendering] window without applying [Rendering of Current Frame].


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode
675.00
CAM
-BG
A
B
#01
#02
P Position X
Cel Number
675.0
①
13 of 108 Frames
Unit: pixel
View: Standard Size

① Select any frame.


C-003-0042.tsf (1:4) <1 secs>
R G B A X Y
②

② At the moment you select a frame, the preview of the still image is displayed.

Step: 02

Preview using movie images

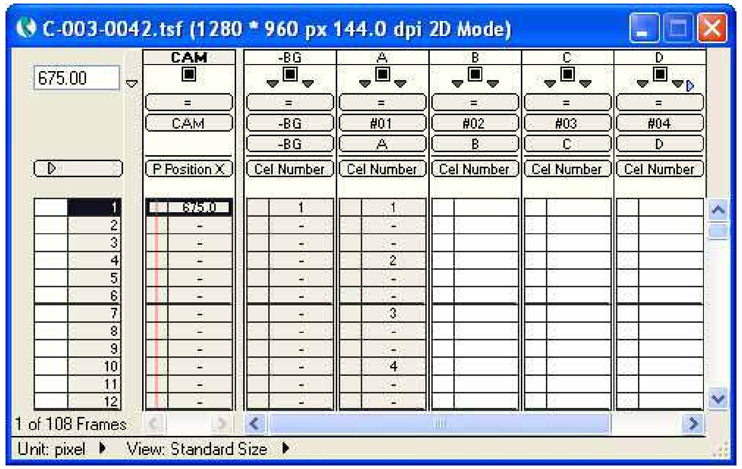
In this step, an explanation is given of the method of previewing the movie using the [RAM Preview] command.

Preview using RAM preview

[RAM Preview] is a function to check the movie(preview) using the animation data expanded in the memory (RAM) without exporting a movie file such as QuickTime or AVI. Because the time for [Image compression] or [File export] that is necessary to output a movie file can be eliminated, the time required to check the inbetweening can be reduced. In addition, the movie is played at the precise timing that is specified in the X-sheet.

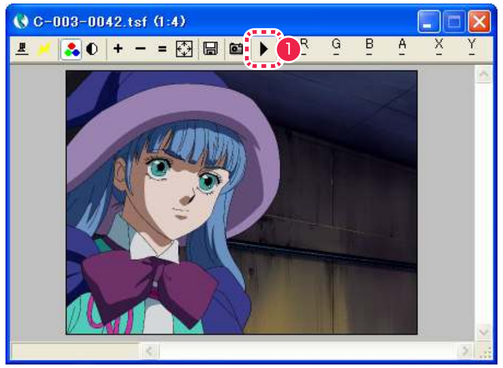
1. Selecting the scene folder to preview

Select the scene folder using the [File Browser], and open [X-sheet].


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
675.00
CAM
-BG
A
B
C
D
#01
#02
#03
#04
P Position X
Cel Number
1 of 108 Frames
Unit: pixel
View: Standard Size

2. Applying the command

Apply RAM preview by selecting [File] menu -> [RAM Preview] -> [Apply]. After playing of the inbetweening is finished, it is played repeatedly (loop play). Press the [Esc] key to stop RAM preview.


C-003-0042.tsf (1:4)
①
R
G
B
A
X
Y

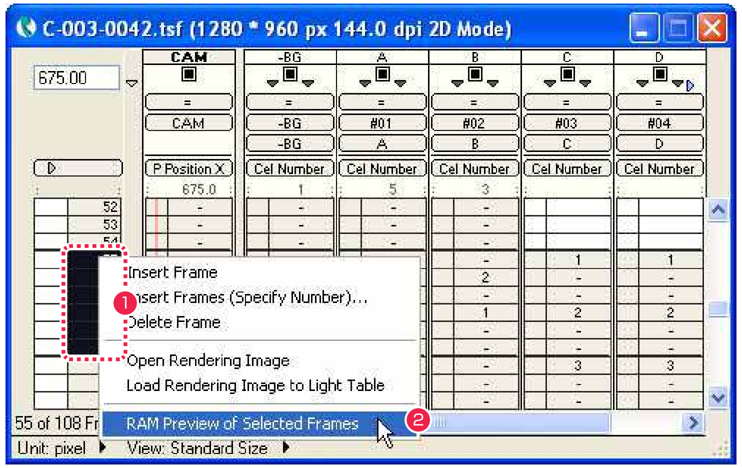
① The [RAM Preview] button on the [Rendering] window can also be clicked.

RAM preview of a selected frames only

[RAM Preview] of certain frames selected on the X-sheet can be applied. Use this feature to check only a part of a scene that has a long duration (long play time).

1. Selecting the scene folder to preview

Select the scene folder using the [File Browser], and open [X-sheet].


C-003-0042.tsf (1280 * 960 px 144.0 dpi 2D Mode)
675.00
CAM
-BG
A
B
C
D
#01
#02
#03
#04
P Position X
Cel Number
①
Insert Frame
Insert Frames (Specify Number)...
Delete Frame
Open Rendering Image
Load Rendering Image to Light Table
RAM Preview of Selected Frames
②
55 of 108 Fr
Unit: pixel
View: Standard Size

① Select the frames for RAM preview.

② Right-click ([Ctrl]+Click in Mac OS X) to view the context menu and select [RAM Preview of Selected Frames].

2. Applying the command

Apply [RAM Preview]. After playing of the frames is finished, they are played repeatedly (loop play). Press the [Esc] key to stop RAM preview.

POINT

RAM preview up to the point where rendering has been finished can be applied by pressing the [Space] key.

Export to movie

Execute [File] menu -> [RAM Preview] -> [Movie Export...] to export the cache data created by RAM previewing as a movie file. If cache is already created as a result of applying the RAM preview command, cache data is used for exporting (omitting rendering), so export can be quickly carried out. If cache has not been created, export is carried out as the data is rendered.

Supported formats for movie export

* Flash (extension: swf)

* QuickTime (extension: mov)

* Video for Windows (extension: avi)

* Flash that is exported using the [RAM Preview] -> [Movie Export...] command will be in raster format. For more information, see "Flash Format Export".

Clear cache

Select [File] menu -> [RAM Preview] -> [Clear Cache] to clear cache created as a result of the RAM preview.

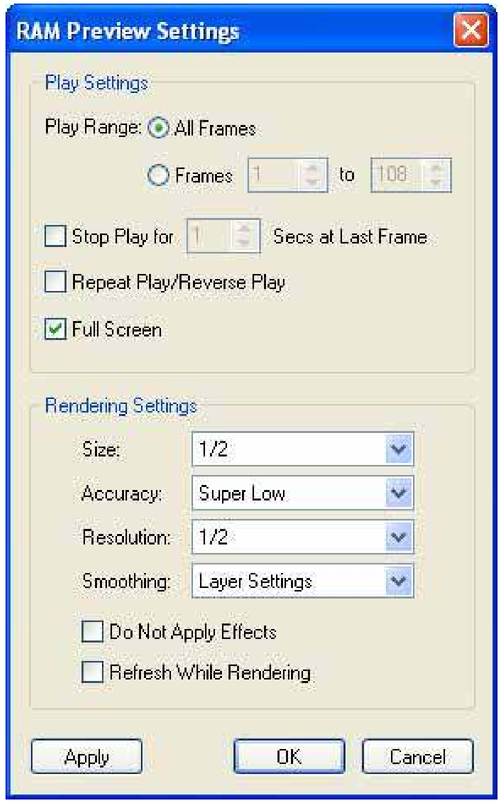
POINT

Relation between RAM preview and memory

When the [RAM Preview] command is applied, all frames to be previewed are rendered in the [Rendering] window. The rendered images are cached in memory. Therefore, if there is not enough memory available, the play time that can be previewed or the size of the preview image might be limited.
If the amount of required cache exceeds the available real memory, CoreRETAS HD allocates cache in virtual memory, so playing at the precise timing may not be guaranteed.

RAM preview settings

Select [File] menu -> [RAM Preview] -> [Settings...] to display the [RAM Preview Settings] dialog box.



Play Range: ● All Frames
○ Frames 1 to 108
☐ Stop Play for 1 Secs at Last Frame
☐ Repeat Play/Reverse Play
☑ Full Screen

Size: 1/2
Accuracy: Super Low
Resolution: 1/2
Smoothing: Layer Settings
☐ Do Not Apply Effects
☐ Refresh While Rendering

[Play Settings]
Specifies settings related to play.

· [Play Range]
Specifies the range to be played by the RAM Preview function.

· [All Frames]
Plays all frames in the X-sheet.

· [Frames [***] to [***]]
Plays frames in the specified range.

· [Stop Play for [***] Secs at Last Frame]
Displays the image of the last frame as a still image for the specified number of seconds in the loop play.

· [Repeat Play/Reverse Play]
In RAM preview, when the last frame in the selected range is displayed, the frames are reverse played. This is an option with which play and reverse play are repeated alternately.

· [Full Screen]
When this checkbox is selected, desktop and other windows and palettes are hidden and the RAM preview image is played at the center of the screen.
When this checkbox is not selected, RAM preview is played in the drawing window. In this case, FPS (actual measurement) is displayed in the title bar of the [Rendering] window.

[Rendering Settings]
Specifies settings related to rendering.

· [Size]
The image size when RAM preview is played can be specified between [1/1] and [1/4].

· [Accuracy]
The rendering accuracy when RAM preview is played can be specified in five levels between [Super low] and [High].
Items that can be specified are the same as those in the [Rendering Settings] dialog.

· [Resolution]
The resolution when RAM preview is played can be selected between [1/1] and [1/4]. If lower resolution is selected, the time required to start RAM preview can be shortened.

· [Smoothing]
The smoothing method when RAM preview is played can be selected from [Layer Settings], [Auto], [All], and [Off].
Items that can be specified are the same as those in the [Rendering Settings] dialog.

· [Do Not Apply Effects]
When this is set ON, effects of the [Special Effects] filter (effect layer) are ignored when RAM preview is played.

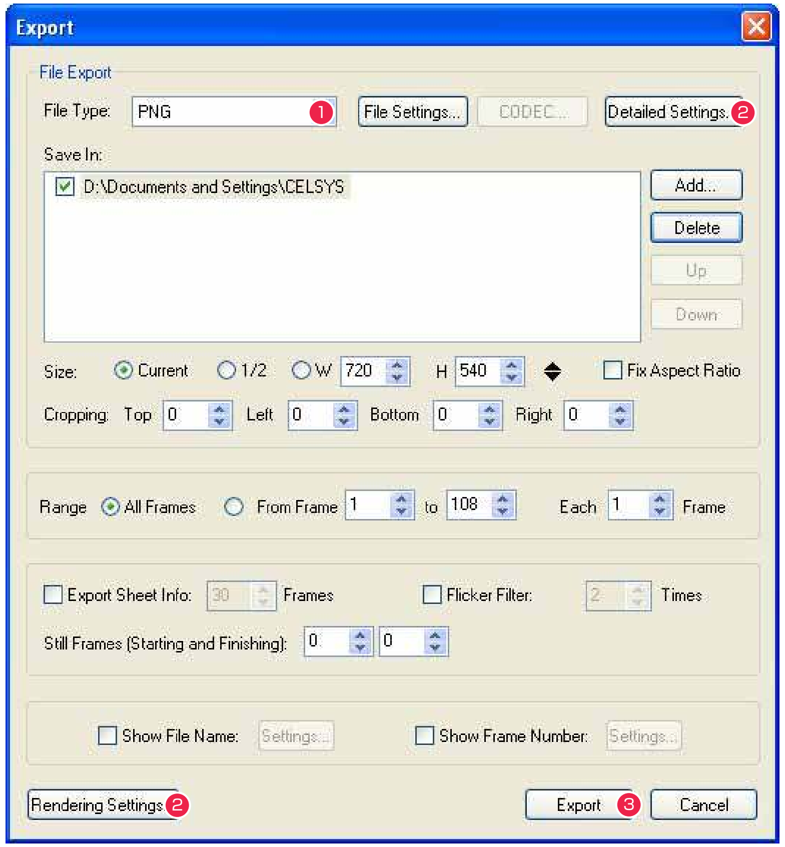
· [Refresh While Rendering]
When this is set ON, intermediate steps of rendering for RAM preview are displayed in the [Rendering] window.

Step: 03 Export

In this step, an explanation is given of the methods of exporting still images and movie files using the [Export] command.

Export of a still image

Still images can be exported to the hard disk according to the settings of the X-sheet.
Select [Export...] from the [File] menu to show the [Export] dialog box.



Export

File Export

File Type: PNG ❶ File Settings... CODEC... Detailed Settings... ❷

Save In:

☑ D:\Documents and Settings\CELSYS

Add... Delete Up Down

Size: ● Current ○ 1/2 ○ W 720 H 540 ☐ Fix Aspect Ratio

Cropping: Top 0 Left 0 Bottom 0 Right 0

Range ● All Frames ○ From Frame 1 to 108 Each 1 Frame

☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: Settings... ☐ Show Frame Number: Settings...

Rendering Settings ❷ Export ❸ Cancel

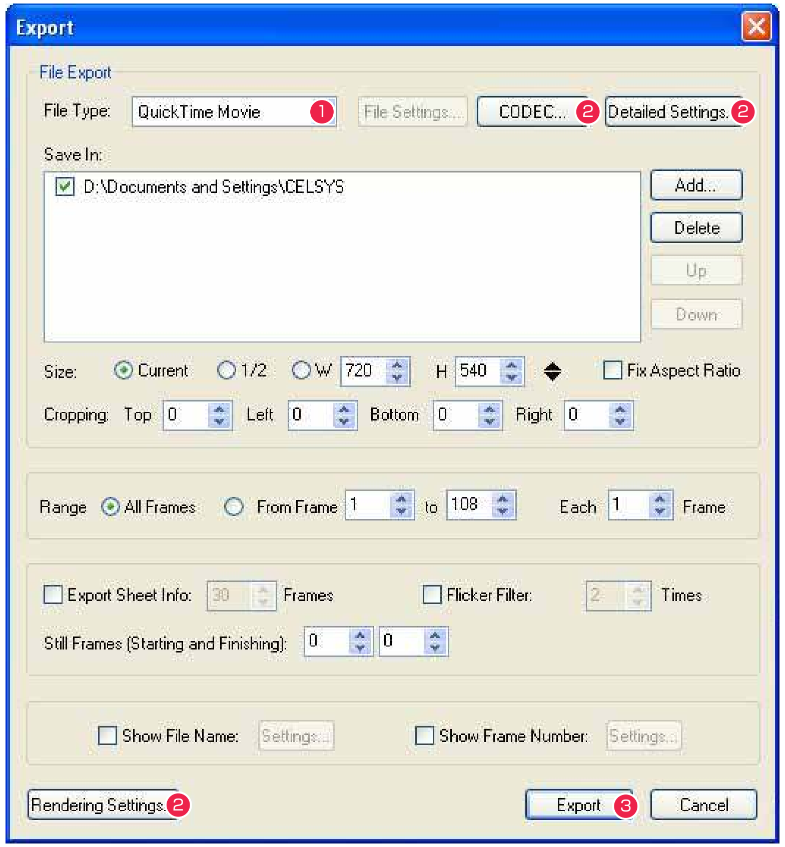
❶ Select the image file format of the still image from [File Type].

❷ Specify [Detailed settings ...] (Still image export dialog box), [Rendering Settings...] (Rendering settings dialog box), and other settings.

❸ Click [Export] to carry out export and rendering of the still image.

Export of movie image

Movie can be exported to the hard disk according to the settings of the X-sheet.
Select [Export...] from the [File] menu to show the [Export] dialog box.



Export

File Export

File Type: QuickTime Movie ❶ File Settings... CODEC... ❷ Detailed Settings... ❷

Save In:

☑ D:\Documents and Settings\CELSYS

Add... Delete Up Down

Size: ● Current ○ 1/2 ○ W 720 H 540 ☐ Fix Aspect Ratio

Cropping: Top 0 Left 0 Bottom 0 Right 0

Range ● All Frames ○ From Frame 1 to 108 Each 1 Frame

☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: Settings... ☐ Show Frame Number: Settings...

Rendering Settings ❷ Export ❸ Cancel

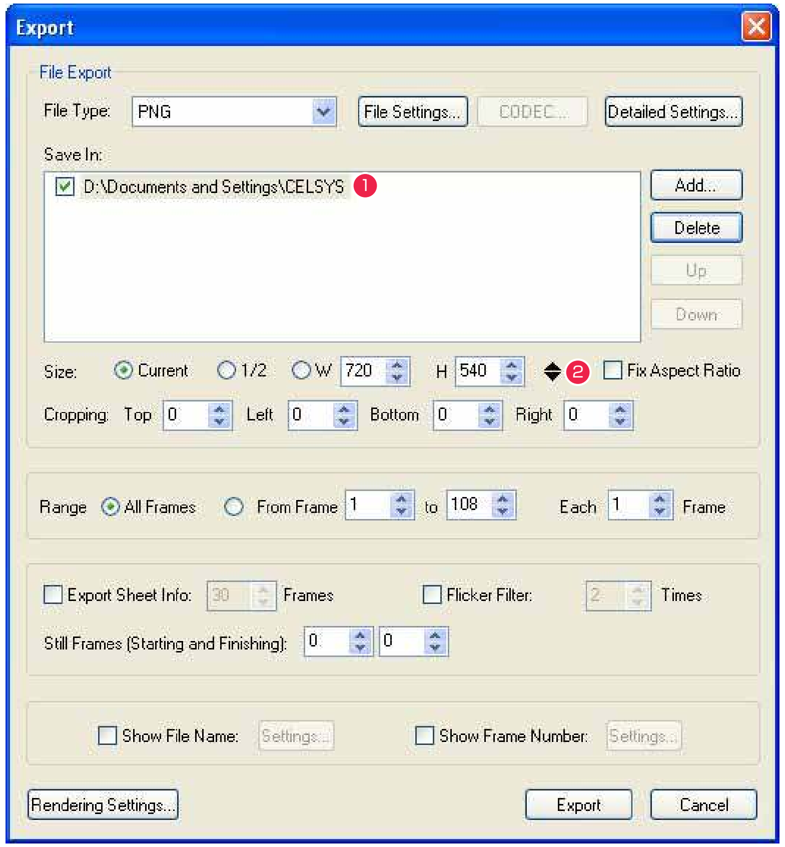
❶ Select the image file format of the movie from [File Type].

❷ Specify [CODEC...] (Video Compression dialog box), [Detailed Settings...] (Movie Export dialog box), [Rendering Settings...] (Rendering settings dialog box), and other settings.

❸ Click [Export] to carry out export and rendering of the movie.

Export dialog box

Select [Export] from the [File] menu to show the [Export] dialog box.



File Type: PNG

Save In:

☑ D:\Documents and Settings\CELSYS ①

Size: ● Current ○ 1/2 ○ W 720 H 540 ② ☐ Fix Aspect Ratio

Cropping: Top 0 Left 0 Bottom 0 Right 0

Range ● All Frames ○ From Frame 1 to 108 Each 1 Frame

☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: ☐ Show Frame Number:

[File Export]
Specifies settings related to file export.

[File Type]
Selects the file format of the image to be exported.

- [File Settings...]
  Specifies optional settings if the file format has optional settings.

- [CODEC...]
  Specifies codec settings if the file format has codec settings.

- [Detailed Settings...]
  If a format other than QuickTime Movie, AVI, or Flash Movie is selected, the [Still Image Export] dialog box will be displayed. If QuickTime Movie, AVI, or Flash Movie is selected, the [Movie Export] dialog box will be displayed.

- [Save In]
  More than one location can be specified. The image will be exported in the top folder whose check box is selected. If the first disk specified in [Save In] becomes full, the destination is automatically switched to the second, third, ... folder specified in [Save In].

① [Folder Path Display] Area
Specify the location to save the image file in the [File Selection] dialog box.

- [Add...] button
  Adds a location to the [Save In] list.

- [Delete] button
  Deletes the location selected in the [Save In] list.

- [Up] button
  Changes the order of the items in the list in the [Folder Path Display] area.

- [Down] button
  Changes the order of the items in the list in the [Folder Path Display] area.

[Size]

- [Current]
  The camera size that is set in the current X-sheet is maintained as the image is exported.

- [1/2]
  The image size is scaled down to 1/2 of the camera size horizontally and vertically.

- [W(Width)] [H(Height)]
  The data is exported using the sizes entered in the numeric input fields.
  Typical sizes can be selected from the pop-up menu.

- [Fix Aspect Ratio]
  Fixes the aspect ratio when adjusting the camera size.

② Pop-up menu
Allows selection of the camera size.

[Cropping]

- [Top] [Left] [Bottom] [Right]
  The specified widths are cut from [Size] (camera size).

[Range]
Specifies the range to export.

- [All Frames]
  Exports all frames in the X-sheet.

- [From Frame [***] to [***]]
  Exports specified frames only. Use this to export only a part of the X-sheet.

- [Each [*] Frame]
  Use this to export frames with intervals.
  Use this to roughly check the camera work to reduce the time required to export.

- [Export Sheet Info]
  When this is set ON, the information set by [Sheet Settings] -> [Info] in the [X-sheet] menu is exported for the specified number of frames before the exported image.

- [Flicker Filter]
  Reduces flicker that occurs on the CRT display when there are horizontal thin lines.

- [Still Frames(Starting and Finishing)]
  This function is convenient when "Still" is required at the start and end of the scene.

- [Starting]
  The first frame is recorded for the specified number of frames before normal export is done.

- [Finishing]
  The last frame is recorded for the specified number of frames before finishing export.

- [Show File Name]
  Shows the file name.

- [Show Frame Number]
  Shows the frame number.

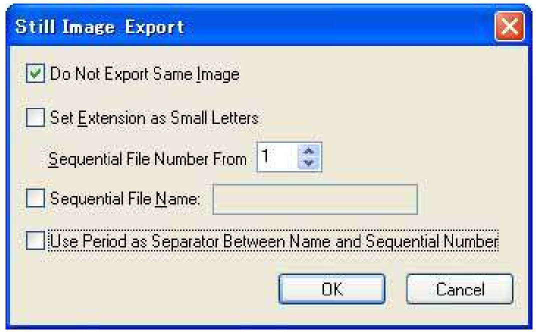
- [Rendering Settings...] button
  Shows the [Rendering Settings] dialog box.

- [Export] button
  Exports data according to the settings.

Note: Flash exported using the [Export] command in the [File] menu is in an explanation is raster format

Still image export dialog box

In the [Export] dialog box, select an image format of still image (other than QuickTime, AVI, Flash) and press the [Detailed Settings...] button to view the [Still Image Export] dialog box.



Still Image Export

☑ Do Not Export Same Image

☐ Set Extension as Small Letters

Sequential File Number From 1

☐ Sequential File Name:

☐ Use Period as Separator Between Name and Sequential Number

- [Do Not Export Same Image]
  If same drawing continues on the X-sheet, the section is not exported.

- [Set Extension as Small Letters]
  Sets the extension of the exported file to lower case.

- [Sequential File Number From]
  When exporting the image as still image files with sequential numbers, specify the number to start.
  Starts from 1 by default. Do not change unless there is a special reason.

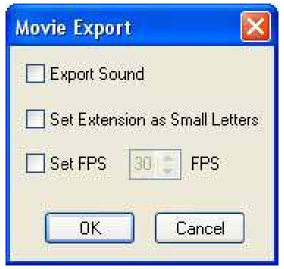
- [Sequential File Name]
  You can specify the image file name as [Any String]+[_(underbar)]+[Sequential Number]+[Extension] when exporting a file with sequential number. Select the check box and enter any string in the text input field.

  Example file name: ABC_0001.TGA
  (When [ABC] is entered)

[Use Period as Separator Between Name and Sequential Number]
Uses [.] (period) as the separator between file name and sequential number.

Movie export dialog box

In the [Export] dialog box, select an image format of movie (QuickTime, AVI, Flash) and press the [Detailed Settings...] button to view the [Movie Export] dialog box.



Movie Export

☐ Export Sound

☐ Set Extension as Small Letters

☐ Set FPS 30 FPS

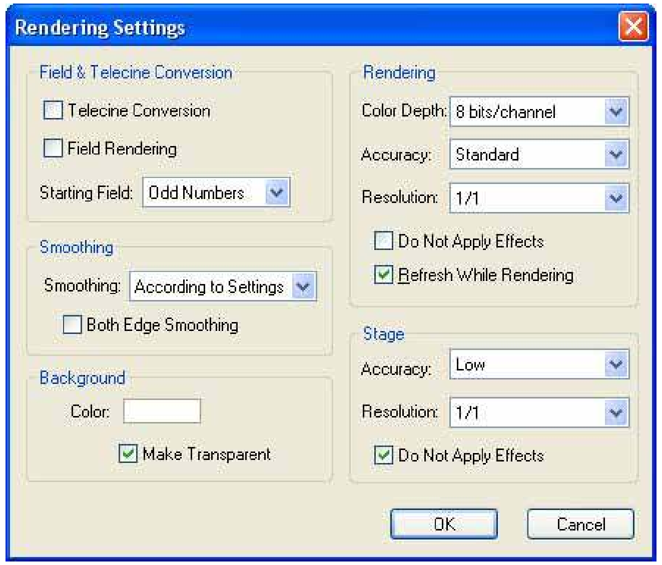
- [Export Sound]
  If audio is registered in the sound layer, movie with audio can be exported.

- [Set Extension as Small letters]
  Sets the extension of the exported file to lower case.

- [Set FPS]
  Allows specification of the frame rate of the movie (FPS).

Rendering settings dialog box

Selecting [Rendering Settings...] from the [rendering] menu opens the [Rendering Settings] dialog box that allows configuration of the settings related to rendering.



Rendering Settings

Field & Telecine Conversion

☐ Telecine Conversion

☐ Field Rendering

Starting Field: Odd Numbers

Smoothing

Smoothing: According to Settings

☐ Both Edge Smoothing

Background

Color:

☑ Make Transparent

Rendering

Color Depth: 8 bits/channel

Accuracy: Standard

Resolution: 1/1

☐ Do Not Apply Effects

☑ Refresh While Rendering

Stage

Accuracy: Low

Resolution: 1/1

☑ Do Not Apply Effects

[Field & Telecine Conversion]
Specifies settings relating to field and telecine conversion.

- [Telecine Conversion]
  When exporting data using X-sheet of 24 FPS, the data is converted to a frame rate of 30 FPS.

- [Field Rendering]
  Renders image using two interlaced fields per frame. In images of 30 FPS, 60 frames are used.

- [Starting Field]
  When [Telecine Conversion] or [Field Rendering] is done, either odd or even field can be specified as the starting field.

[Smoothing]
Specifies configuration related to Smoothing.

- [Layer Settings]
  Settings for each layer specified in the [Layer Settings] palette are used.

- [Auto]
  If smoothing for each layer by cell arrange or scaling enables better rendering, smoothing is performed automatically.

- [All]
  Smoothing is performed in all layers forcibly. Individual settings in [Layer Settings] palette are ignored.

- [Off]
  Smoothing is not performed in any layer. Individual settings in [Layer Settings] palette are ignored.

- [Both Edge Smoothing]
  Smoothing is performed on the RGB plane of the exported image, to which smoothing is typically not performed.

[Background]
Specifies settings related to background.

- [Color]
  Specifies the background color. This is a simple plane that is filled with one color and placed behind the bottom [-BG] layer. Clicking the [Color] box opens a dialog box that allows the color to be changed.

- [Make Transparent]
  Makes the background color transparent.

[Rendering]
Configuration related to rendering can be done.

- [Color Depth]
  Selects the color depth for rendering [8 bits/channel] or [16 bits/channel].

- [Accuracy]
  Specifies the quality of rendering. Normally, [Standard] is recommended.

- [Resolution]
  Specifies the resolution to export to the [Rendering] window.

- [Do Not Apply Effects]
  Effects are not applied in rendering.

- [Refresh While Rendering]
  When this is set ON, intermediate steps of rendering are displayed in the [Rendering] window. When this is set OFF, the time required for rendering can be reduced a little.

[Stage]
Configuration related to the [Stage] window can be done.

- [Accuracy]
  Specifies the accuracy of rendering.

- [Resolution]
  Specifies the resolution to export to the [Stage] window.

- [Do Not Apply Effects]
  Effects are not applied in rendering.

POINT

Number of threads in [Resolution]

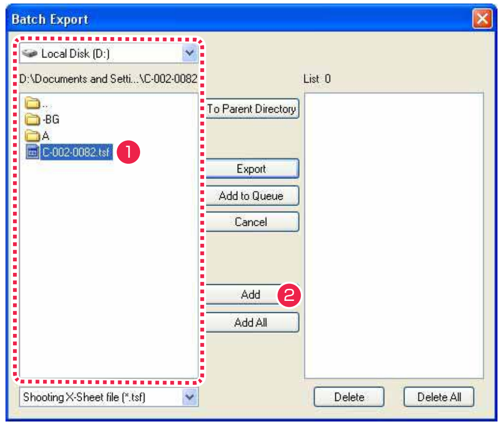
It is effective to set the number of threads to be the same as the number of CPUs (or cores). For example, specify one thread in a PC with 1 CPU and two threads in a PC with 2 CPU (or dual core CPU).
If you select two threads or four threads in a PC with one CPU, rendering speed is not improved.

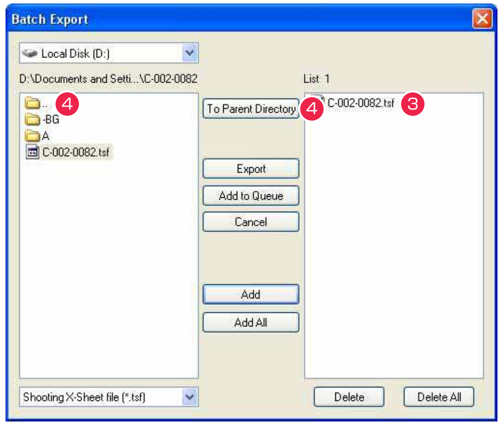
Step: 04 Batch export of a number of scenes

In this step, an explanation is given of the batch export of a number of scenes.

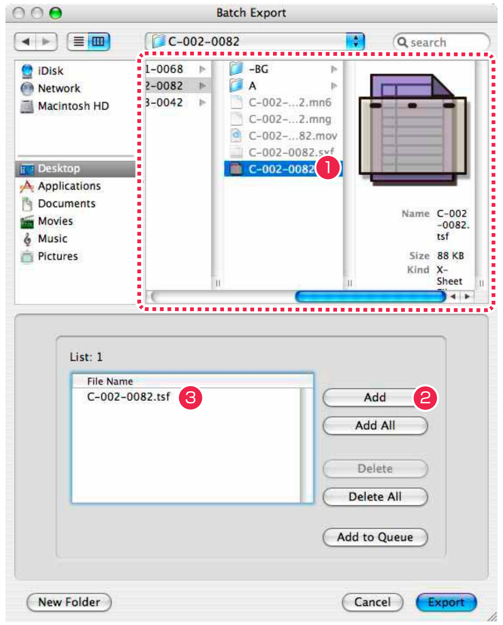
Batch export of a number of scenes

Select [Batch Export...] from the [File] menu to show the [Batch Export] dialog box.


Batch Export
Local Disk (D:)
D:\Documents and Setti...\C-002-0082
List 0
..
-BG
A
C-002-0082.tsf
①
To Parent Directory
Export
Add to Queue
Cancel
Add
②
Add All
Shooting X-Sheet file (*.tsf)
Delete
Delete All


Batch Export
Local Disk (D:)
D:\Documents and Setti...\C-002-0082
List 1
..
④
-BG
A
C-002-0082.tsf
To Parent Directory
④
C-002-0082.tsf
③
Export
Add to Queue
Cancel
Add
Add All
Shooting X-Sheet file (*.tsf)
Delete
Delete All

[Windows Version]


Batch Export
C-002-0082
search
iDisk
Network
Macintosh HD
Desktop
Applications
Documents
Movies
Music
Pictures
1-0068
2-0082
3-0042
-BG
A
C-002-...2.mn6
C-002-...2.mng
C-002-...82.mov
C-002-0082.sxf
C-002-0082
①
Name C-002-0082.tsf
Size 88 KB
Kind X-Sheet
List: 1
File Name
C-002-0082.tsf
③
Add
②
Add All
Delete
Delete All
Add to Queue
New Folder
Cancel
Export

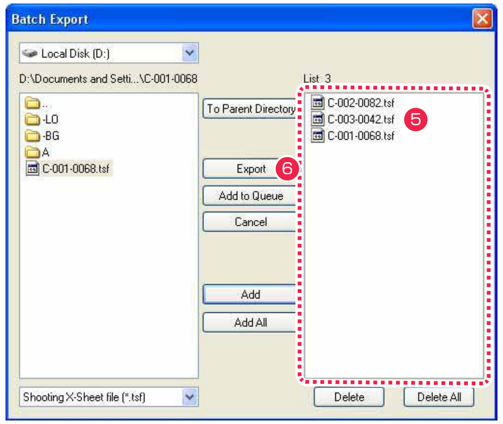
[Mac OS X Version]

① Select the [Shooting X-sheet file] (*.tsf) for [Batch Export] from the [File Selection] list.

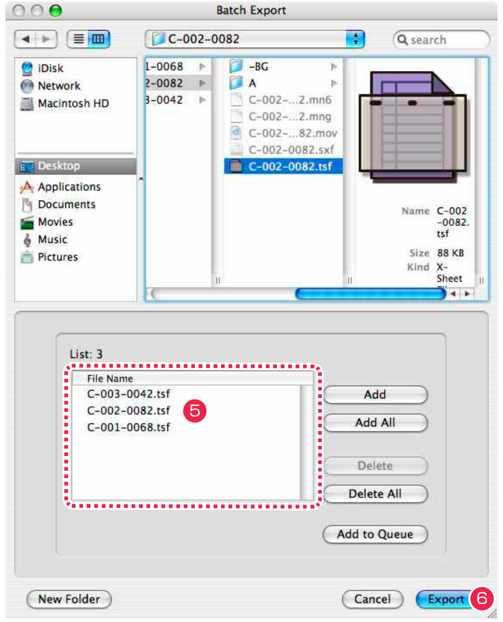
② Click the [Add] button.

③ The selected [Shooting X-sheet File] is loaded to the [Batch Export] list(The X-sheets loaded to this list are to be exported).

④ Double-click the [..] folder icon located at the top of the [File Selection] list or click the [To Parent Directory] button to go back to the upper directory(Windows only).


Batch Export
Local Disk (D:)
D:\Documents and Setti...\C-001-0068
List 3
..
-LO
-BG
A
C-001-0068.tsf
To Parent Directory
C-002-0082.tsf
C-003-0042.tsf
C-001-0068.tsf
⑤
Export
⑥
Add to Queue
Cancel
Add
Add All
Shooting X-Sheet file (*.tsf)
Delete
Delete All

[Windows Version]


Batch Export
C-002-0082
search
iDisk
Network
Macintosh HD
Desktop
Applications
Documents
Movies
Music
Pictures
1-0068
2-0082
3-0042
-BG
A
C-002-...2.mn6
C-002-...2.mng
C-002-...82.mov
C-002-0082.sxf
C-002-0082.tsf
Name C-002-0082.tsf
Size 88 KB
Kind X-Sheet
List: 3
File Name
C-003-0042.tsf
C-002-0082.tsf
C-001-0068.tsf
⑤
Add
Add All
Delete
Delete All
Add to Queue
New Folder
Cancel
Export
⑥

[Mac OS X Version]

⑤ Repeat the same procedure to Loaded multiple [Shooting X-sheet Files] for export to the [Batch Export] List.

All the X-sheets loaded to this list are to be exported.

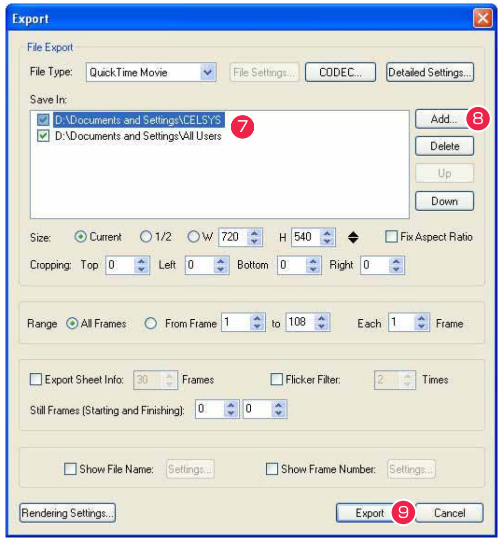
⑥ Click the [Export] button to show the [Export] dialog box.

POINT

Double-clicking an X-sheet file

You can double-click the icon of [Shooting X-sheet File] or file name on the [File Selection] list to add the selected file to the [Batch Export] list in the Windows version (This is the same operation as pressing the [Add] button).

In Mac OS X, all files in the [Export] list are to be exported and the [Export] dialog box will be displayed (This is the same operation as pressing the [Export] button).


File Type: QuickTime Movie

Save In:
☑ D:\Documents and Settings\CELSYS
☑ D:\Documents and Settings\All Users

Size: ● Current ○ 1/2 ○ W 720 H 540 ☐ Fix Aspect Ratio

Cropping: Top 0 Left 0 Bottom 0 Right 0

Range ● All Frames ○ From Frame 1 to 108 Each 1 Frame

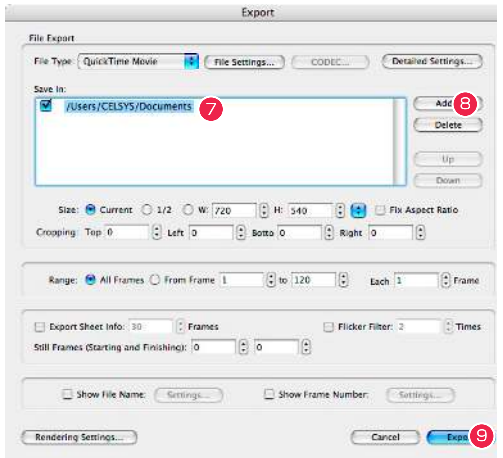
☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: ☐ Show Frame Number:

Export
File Export
File Settings...
CODEC...
Detailed Settings...
⑦
Add...
⑧
Delete
Up
Down
Settings...
Rendering Settings...
Export
⑨
Cancel

[Windows Version]


File Type: QuickTime Movie

Save In:
☑ /Users/CELSYS/Documents

Size: ● Current ○ 1/2 ○ W: 720 H: 540 ☐ Fix Aspect Ratio

Cropping: Top 0 Left 0 Botto 0 Right 0

Range: ● All Frames ○ From Frame 1 to 120 Each 1 Frame

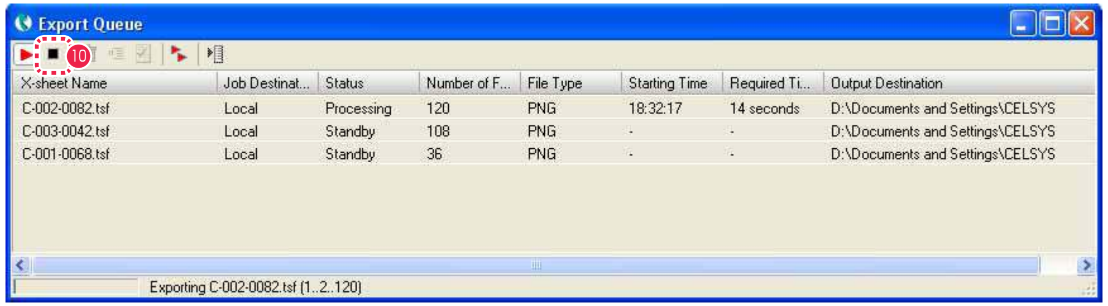
☐ Export Sheet Info: 30 Frames ☐ Flicker Filter: 2 Times

Still Frames (Starting and Finishing): 0 0

☐ Show File Name: ☐ Show Frame Number:

Export
File Export
File Settings...
CODEC...
Detailed Settings...
⑦
Add
⑧
Delete
Up
Down
Settings...
Rendering Settings...
Cancel
Expo
⑨

[Mac OS X Version]


Export Queue
⑩

X-sheet Name	Job Destinat...	Status	Number of F...	File Type	Starting Time	Required Ti...	Output Destination
C-002-0082.tsf	Local	Processing	120	PNG	18:32:17	14 seconds	D:\Documents and Settings\CELSYS
C-003-0042.tsf	Local	Standby	108	PNG	-	-	D:\Documents and Settings\CELSYS
C-001-0068.tsf	Local	Standby	36	PNG	-	-	D:\Documents and Settings\CELSYS

Exporting C-002-0082.tsf (1...2...120)

⑦ Specify the export destination from the [Save In] list. The data will be exported to the top [Save In] location whose check box is selected.

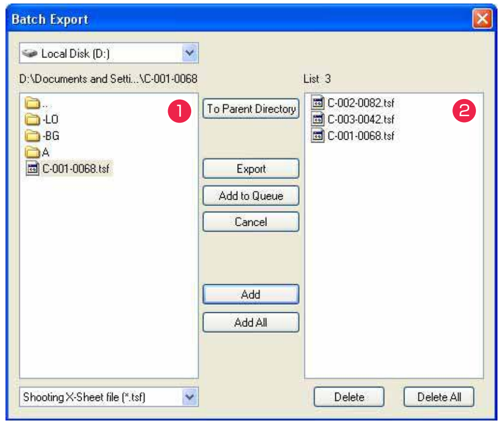
(If the export destination is full, the destination will be automatically switched to the next destination specified in [Save In]).

⑧ If the desired destination is not in [Save In], press the [Add...] button to add.

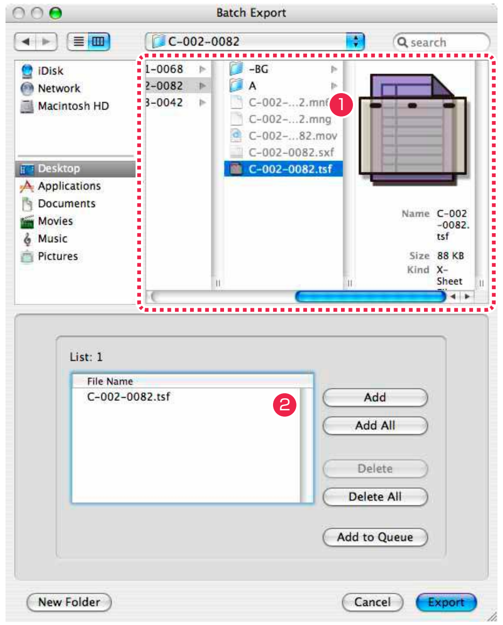
⑨ Clicking [Export] after configuring the settings load X-sheets to the [Export Queue] window and export will be performed in order.

⑩ If the [Stop] button in the [Export Queue] window is ON, export will not be started. For more information, see the [Export Queue] window.

Batch export dialog box


Batch Export
Local Disk (D:)
D:\Documents and Setti...\C-001-0068
..
-LO
-BG
A
C-001-0068.tsf
①
To Parent Directory
Export
Add to Queue
Cancel
Add
Add All
List 3
C-002-0082.tsf
C-003-0042.tsf
C-001-0068.tsf
②
Shooting X-Sheet file (*.tsf)
Delete
Delete All

[Windows Version]


Batch Export
C-002-0082
search
iDisk
Network
Macintosh HD
Desktop
Applications
Documents
Movies
Music
Pictures
1-0068
2-0082
3-0042
-BG
A
C-002-...2.mnf
C-002-...2.mng
C-002-...82.mov
C-002-0082.sxf
C-002-0082.tsf
①
Name C-002-0082.tsf
Size 88 KB
Kind X-Sheet
List: 1
File Name
C-002-0082.tsf
②
Add
Add All
Delete
Delete All
Add to Queue
New Folder
Cancel
Export

[Mac OS X Version]

① [File Selection List]
Selects the [Shooting X-sheet File] (*.tsf) for [Batch Export].

② [Batch Export List]
This is the list of [Shooting X-sheet File] for [Batch Export].

- [To Parent Directory] button (Windows only)
  Moves to the upper layer from the location currently opened in the [File Selection] list.

- [Export] button
  Fixes all the files loaded in the [Batch Export] list as files to be exported and shows the [Export] dialog box.

- [Add to Queue] button
  Registers all the files loaded in the [Batch Export] list to the [Export Queue] window directly in waiting status without going through the [Export] dialog box. Settings specified in the [Export] dialog box at that point are used.

- [Add] button
  Adds the selected [Shooting X-sheet File] in the [File Selection] list to the [Batch Export] list. Select a folder and press the [Add] button to loaded all sheets in the folder.

- [Add All] button
  Adds all the [Shooting X-sheet File] in the folder opened in the [File Selection] list to the [Batch Export] list.

- [Delete] button
  Deletes the file selected in the [Batch Export] list.

- [Delete All] button
  Deletes all the files loaded in the [Batch Export] list.

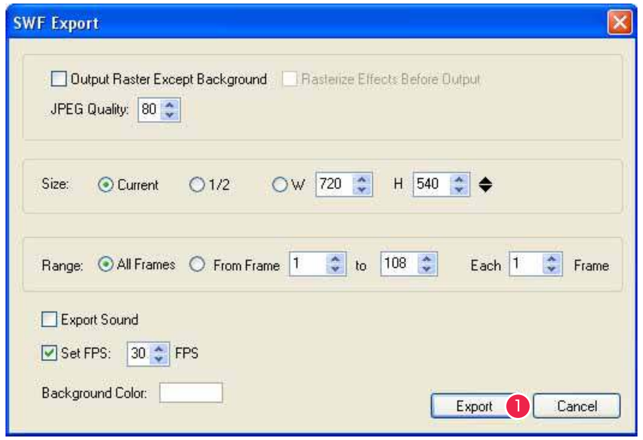
Step: 05

Flash format export

In this step, an explanation is given about Flash format export.

Flash format export

Data created and colored in vector format can be exported as a Flash format movie file (*.swf). While a [Shooting X-sheet] (*.tsf) is opened or selected in the file browser, select [SWF Export...] from the [File] menu to show the [SWF Export] dialog box.


SWF Export

☐ Output Raster Except Background ☐ Rasterize Effects Before Output

JPEG Quality: 80

Size: ● Current ○ 1/2 ○ W 720 H 540

Range: ● All Frames ○ From Frame 1 to 108 Each 1 Frame

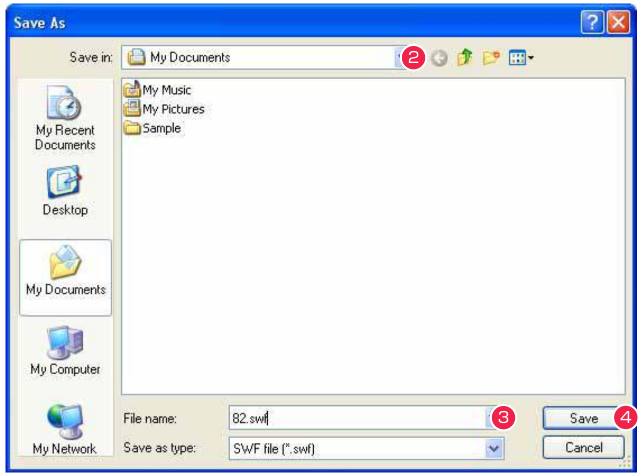
☐ Export Sound

☑ Set FPS: 30 FPS

Background Color:

Export
❶
Cancel

❶ Click the [Export] button after configuring the settings to show the [Save As] dialog box.


Save As
Save in:
❷
My Music
My Pictures
Sample
My Recent Documents
Desktop
My Documents
My Computer
My Network
❸
Save
❹
Cancel

Save in: My Documents

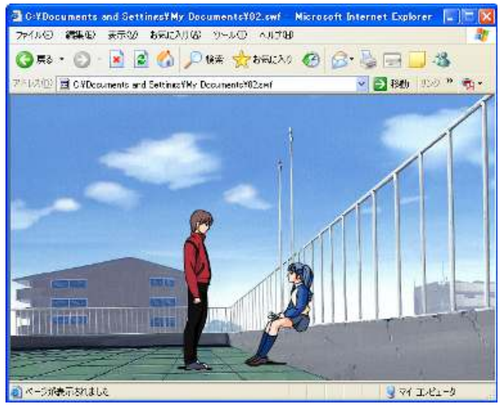
File name: 82.swf

Save as type: SWF file (*.swf)

❷ Select the location to save.

❸ Specify a file name.

❹ Click [Save] to start export of the SWF file to the specified location.


C:¥Documents and Settings¥My Documents¥02.swf - Microsoft Internet Explorer

❺ Open the created SWF file using an application to which Flash Player is installed to play the Flash format movie.

POINT

Vector format Flash export

There are two types of Flash export.

(1) To use the [File] >[SWF Export...] command

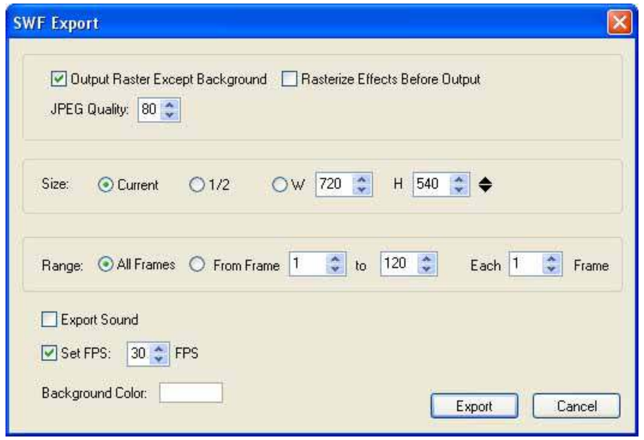
(2) To use the [File] > [Export...] command and select [Flash Movie] as the export format

Vector format Flash can be created only when a vector CEL format image is used as the material (cel) and the [File] > [SWF Export...] command is used to export.
When the material is not a vector image, vector format Flash cannot be exported even if the [SWF Export...] command is used. In addition, vector format Flash cannot be exported using the [Export...] command even if the material is a vector image.
Using vector format Flash, the size can be reduced while utilizing the advantages of vector format.

Sample file included with CoreRETAS HD

- * The size of the SWF file to which raster drawing sample "C-002-0082" is exported -> 16.8 MB
- * The size of the SWF file to which vector drawing sample "C-002-0082" is exported -> 732 KB

SWF export dialog box


SWF Export

☑ Output Raster Except Background ☐ Rasterize Effects Before Output

JPEG Quality: 80

Size: ● Current ○ 1/2 ○ W 720 H 540

Range: ● All Frames ○ From Frame 1 to 120 Each 1 Frame

☐ Export Sound

☑ Set FPS: 30 FPS

Background Color:

- [Output Raster Except Background]
  Images drawn in raster format except the background (BG layer) will be exported.

- [Rasterize Effects Before Output]
  Normally, special effect using [Effects] cannot be expressed in vector format. Set this ON to convert such [Effects] in raster format before output.

- [JPEG Quality]
  Specifies the quality of the compression of raster format image (including background) in the range between "1" and "100".
  The default value is set to "80".

[Size]
Specifies the size of the Flash movie.

- [Current]
  The camera size that is set in the current X-sheet is maintained as the image is exported.

- [1/2]
  The image size is scaled down to 1/2 of the [Camera Size] of the [Shooting X-sheet] horizontally and vertically (area 1/4).

- [W(Width)] [H(Height)]
  Exports in the specified size. Typical sizes can be selected from the pop-up menu on the right.

[Range]
Specifies the range of frames to export.

- [All Frames]
  Exports all frames in the X-sheet.

- [From Frame [***] to [***]]
  Exports frames in the specified range only.

- [Each [*] Frame]
  Use this when exporting frames with intervals.
  Use this when roughly checking the camera work to reduce the time required to export.

- [Export Sound]
  If audio is registered in the sound layer, movie with audio can be exported.

- [Set FPS]
  Specifies the display rate of frames in a "4" to "60" range.
  The default value is "30" FPS and check box is selected.

- [Background Color]
  Specifies the background color of the Flash movie.

[Export] button
Exports Flash movie.

Chapter 7

Application description: settings

This chapter introduces how to edit preferences and shortcuts in CoreRETAS HD.

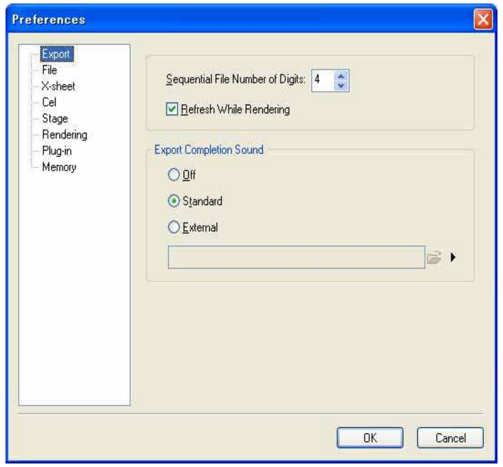
Step:01 Setting the preferences
Step:02 Editing the keyboard shortcuts
Step:03 Canceling and re-starting work

Step: 01 Setting the preferences

In this step, an explanation is given about the preferences.

Setting the preferences

You can change preferences with the dialog box that appears when you select [Settings] > [Preferences...] from the [Edit] menu (Windows), or [Preferences...] from the application menu (Macintosh).



Sequential File Number of Digits: 4

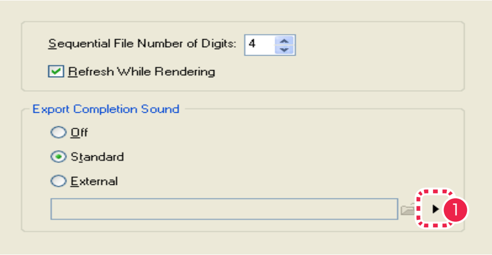
☑ Refresh While Rendering

Export Completion Sound

○ Off
● Standard
○ External

Export

Specifies settings related to export.



Sequential File Number of Digits: 4

☑ Refresh While Rendering

Export Completion Sound

○ Off
● Standard
○ External

- [Sequential File Number of Digits]
  Specify the number of digits when exporting a sequential file. Default setting is four.

- [Refresh While Rendering]
  When this is set ON, intermediate steps of rendering are displayed in the [Rendering] window. When this is set OFF, the time required for rendering can be reduced a little bit.

[Export Completion Sound]
Specify the sound to notify completion of export.

- [Off]
  Uses no sound to notify completion of export.

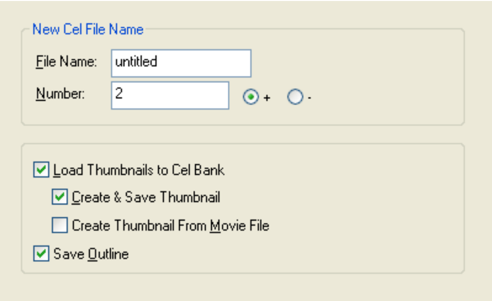
- [Standard]
  Uses CoreRETAS HD standard sound to notify completion of export.

- [External]
  Uses an external audio file to notify completion of export. Available audio file types are [wav] and [AIFF] formats.

① Play Button
Plays the [Sound] file selected in [External] to check the sound.

File

Specifies settings related to files.



New Cel File Name

File Name: untitled

Number: 2 ● + ○ -

☑ Load Thumbnails to Cel Bank
☑ Create & Save Thumbnail
☐ Create Thumbnail From Movie File
☑ Save Outline

[New Cel File Name]
The default file name can be specified when a new [Cel] is created.

- [File Name]
  Enter an arbitrary name.

- [Number]
  Specify the default sequential number that will be appended to a new [File Name].

- [+]
  The number specified in [Number] is incremented every time a new [Cel] is created and attached to [File Name].

- [−]
  The number specified in [Number] is decremented every time a new [Cel] is created and attached to [File Name].

- [Load Thumbnails to Cel Bank]
  When an image is registered to Cel Bank, its thumbnail is also loaded and displayed.

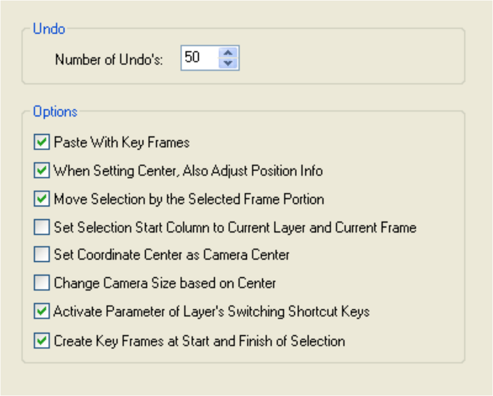
- [Create & Save Thumbnail]
  When an image is registered to Cel Bank, its thumbnail is automatically created.

- [Create Thumbnail From Movie File]
  When a movie file is registered to Cel Bank, its thumbnail is automatically created.

- [Save Outline]
  Cel`s outline data to be displayed in the [Stage] window is added to the image and saved.
  When outlines are saved, [Outline Display] can be executed more quickly the second time and later.

X-sheet

Specifies settings related to X-sheet.



Undo

Number of Undo's: 50

Options

☑ Paste With Key Frames

☑ When Setting Center, Also Adjust Position Info

☑ Move Selection by the Selected Frame Portion

☐ Set Selection Start Column to Current Layer and Current Frame

☐ Set Coordinate Center as Camera Center

☐ Change Camera Size based on Center

☑ Activate Parameter of Layer's Switching Shortcut Keys

☑ Create Key Frames at Start and Finish of Selection

[Undo]

[Undo] can be configured under the [Edit] menu.

・[Number of Undo`s]

Specify the number of operations that can be undone by [Undo] in the range of 1 – 100. The default value is 50.

[Options]

Toggle various settings using the corresponding check boxes.

・[Paste With Key Frames]

When parameters that are cut or copied are pasted, key frames are also pasted.

・[When Setting Center, Also Adjust Position Info]

When "center of pegbar" or "center of layer" is changed, values of "position X" and "position Y" are automatically corrected so that positions of images on the stage are not moved.

・[Move Selection by the Selected Frame Portion]

When this is set ON, selection moves for the same number as the number of the frames in the selection when the range is moved using the arrow keys. When this is set OFF, the range moves frame by frame.

・[Set Selection Start Column
to Current Layer and Current Frame]

When multiple [Data Cells] are selected by dragging, the frame with which selection is started (the one that was clicked first) is set to the current frame.

・[Set Coordinate Center as Camera Center]

When a new X-sheet is created, the camera center is set to the stage origin (P position X=0, Y=0).

・[Change Camera Size based on Center]

When this is set ON, the camera size is changed using the camera center as the center when the camera size is changed by [Sheet Settings] > [General...] command in the [X-sheet] menu. When this is set OFF, the camera size is changed using the upper left corner of the camera as the center.

・[Activate Parameter of Layer`s Switching Shortcut Keys]

Activates shortcut operations to switch parameter of layer on the X-sheet.

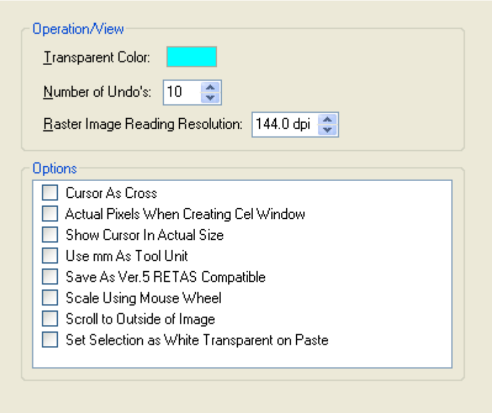
・[Create Key Frames at Start and Finish of Selection]

When this is set ON and the [Key Frame Setting] button is pressed (or the [Key Frame] command in the [X-sheet] menu is used) while more than one frame is selected in the X-sheet, key frames are created at the start and finish of selection.

When this is set Off, key frames are created at all frames in the selection.

Cel

Specifies settings related to the [Stage] window.



Operation/View

Transparent Color:

Number of Undo's: 10

Raster Image Reading Resolution: 144.0 dpi

Options

☐ Cursor As Cross

☐ Actual Pixels When Creating Cel Window

☐ Show Cursor In Actual Size

☐ Use mm As Tool Unit

☐ Save As Ver.5 RETAS Compatible

☐ Scale Using Mouse Wheel

☐ Scroll to Outside of Image

☐ Set Selection as White Transparent on Paste

[Operation/View]

Specify configuration related to operation and view of the [Cel] window.

・[Transparent Color]

Select the color that is displayed as the transparent color. Normally, it is set to light blue (R:0 G:255 B:255).

・[Number of Undo`s]

Specify the number of operations that can be undone by [Undo] in the [Edit] menu in the range of 1 – 20. The default value is 10.

・[Raster Image Reading Resolution]

Specify the resolution when reading raster images that do not have DPI information such as TGA format or BMP format in the range of 37.5 - 1440.0 dpi. The default value is 144.0 dpi.

[Options]

Toggle various settings using the corresponding check boxes.

・[Cursor As Cross]

The cursor on the drawing area is always displayed as cross.

・[Actual Pixels When Creating Cel Window]

Shows the [Cel] window in 100% view mode.

・[Show Cursor In Actual Size]

Shows the shapes and sizes of tools specified in the [Cel] window in the actual dimensions according to zoom in and zoom out.

・[Use mm As Tool Unit]

Uses mm as the unit for tools. When this is set OFF, pixel is used.

・[Save As Ver. 5 RETAS Compatible]

Saves images in RETAS!PRO Ver. 5 compatible format.

・[Scale Using Mouse Wheel]

Zooms in when you turn the mouse wheel upward and zooms out when you turn the mouse wheel downward.

When this is set OFF, mouse wheel operation is assigned to vertical scrolling.

・[Scroll to Outside of image]

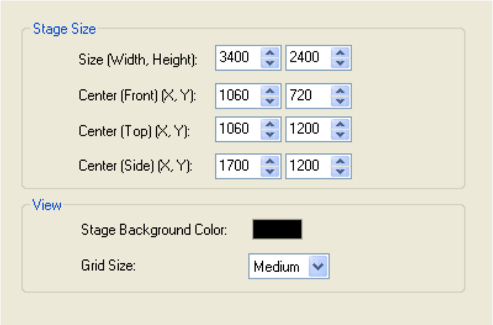
Enable scroll to the outside of an image.

・[Set Selection as White Transparent on Paste]

Convert a white part of a selection area into a transparent color in paste.

Stage

Specifies settings related to the [Stage] window.



Stage Size
Size (Width, Height): 3400 2400
Center (Front) (X, Y): 1060 720
Center (Top) (X, Y): 1060 1200
Center (Side) (X, Y): 1700 1200

View
Stage Background Color: ■
Grid Size: Medium

[Stage Size]
Sets the stage size and center pointer using pixel as the unit.
The "center of the stage" is used as the origin of all coordinates (origin of the global coordinates) (except "center of pegbar " and "center of layer").

- [Size (Width, Height)]
  Specify the stage [Width] in the left side box (3400 - 20000) and [Height] in the right side box (2400 - 20000).
  The default values are 3400 pixel for [Width] and 2400 pixel for [Height].

- [Center (Front) (X, Y)]
  Specify the coordinates of the center in [Front View] in the 0 - 20000 range.
  Specify the horizontal coordinate [X] in the left side box and vertical coordinate [Y] in the right side box.
  The default values are 1060 pixel for [X] and 720 pixel for [Y].

- [Center (Top) (X, Y)]
  Specify the coordinates of the center in [Top View] in the 0 - 20000 range.
  Specify the horizontal coordinate [X] in the left side box and vertical coordinate [Y] in the right side box.
  The default values are 1060 pixel for [X] and 1200 pixel for [Y].

- [Center (Side) (X, Y)]
  Specify the coordinates of the center in [Side View] in the 0 - 20000 range.
  Specify the horizontal coordinate [X] in the left side box and vertical coordinate [Y] in the right side box.
  The default values are 1700 pixel for [X] and 1200 pixel for [Y].

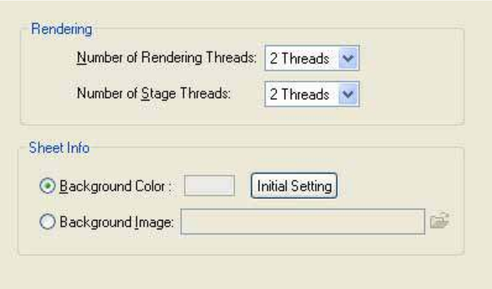
[View]
Specifies settings related to stage rendering.

- [Stage Background Color]
  Select the color that is displayed on the background of [Stage] area. The default is set to black (RGB = 0, 0, 0).

- [Grid Size]
  Select the size of the grid that is displayed on the stage from [Large], [Medium], and [Small].

Rendering

Specifies settings related to rendering.



Rendering
Number of Rendering Threads: 2 Threads
Number of Stage Threads: 2 Threads

Sheet Info
● Background Color :

○ Background Image:

[Rendering]
Specifies settings related to threads of rendering process.
Select from [1 Thread], [2 Threads], and [4 Threads].
Generally, the best result can be obtained and the rendering process can be executed quickly if [2 Threads] is selected when using a PC with 2 CPUs or dual core CPU and [4 Threads] is selected when you are using a PC with 4 CPUs or Quad core CPU.

- [Number of threads in Rendering Window]
  Specify how many threads the rendering calculation process is divided into.

- [Number of Stage threads]
  Specify how many threads the stage calculation process is divided into.

[Sheet Info]
Specify configuration related to the background of sheet information of X-sheet (board).

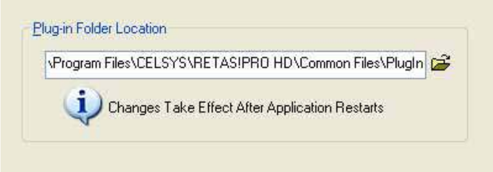
- [Background Color]
  Select the color that is displayed on the background of [Board].

- [Default Setting] button
  Resets the [Background Color] of the board to the default setting (RGB = 235, 235, 235).

- [Background Image]
  Reads an image file and uses it as the background of the board.

Plug-in

In RETAS!PRO HD series, reading/writing of image files and effects are provided by plug-ins. Specify the location of plug-ins.



Plug-in Folder Location
\Program Files\CELSYS\RETAS!PRO HD\Common Files\PlugIn
Changes Take Effect After Application Restarts

[Plug-in Folder Location]
Specify the location of plug-in folder.
Changes become effective after restarting the application.

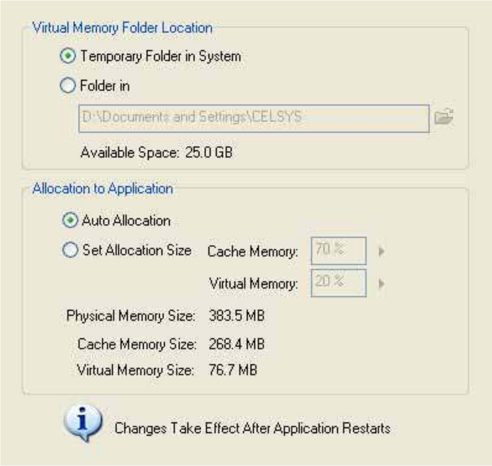
POINT

Plug-in folder location

Do not change the location of plug-in folder if there is no special reason.

Memory

Memory related settings can be configured. Changes become effective after restarting CoreRETAS HD.


Virtual Memory Folder Location
Allocation to Application
Changes Take Effect After Application Restarts

● Temporary Folder in System
○ Folder in
D:\Documents and Settings\CELSYS
Available Space: 25.0 GB

● Auto Allocation
○ Set Allocation Size Cache Memory: 70 %
Virtual Memory: 20 %
Physical Memory Size: 383.5 MB
Cache Memory Size: 268.4 MB
Virtual Memory Size: 76.7 MB

[Virtual Memory Folder Location]
Select the location on the HDD where the virtual memory is to be created when the physical memory (actual memory) becomes insufficient.

- [Temporary Folder in System]
  Sets the virtual memory in the temporary folder created by the OS.
- [Folder in]
  The folder (other than the system temporary folder) in which the virtual memory is located can be specified.
- [Available Space]
  Shows the remaining space on the HD drive which was specified as the virtual memory folder location.
  For the HDD space required to use CoreRETAS HD, see "CoreRETAS HD System Requirements" in Chapter 1 "Introduction."

[Allocation to Application]
Specify memory allocation to the application.

- [Auto Allocation]
  Allocates the memory automatically (recommended) .
- [Set Allocation Size]
  Memory allocation can be manually configured.
- [Cache Memory]
  Enter the cache memory that is allocated to CoreRETAS HD in the range of 20 - 80%.
- [Virtual Memory]
  Enter the virtual memory that is allocated to CoreRETAS HD in the range of 20 - 80%.
- [Physical Memory Size]
  The available physical memory capacity.
- [Cache Memory Size]
  The available cache memory capacity.
- [Virtual Memory Size]
  The available virtual memory capacity.

POINT

Pay attention to the memory size

When selecting [Set Allocation Size], be careful with the quantity to be allocated. Do not allocate till the remaining capacity ([Physical Memory Size] -[Allocatable Size]) becomes too small. Allocating too much memory may destabilize the operation.

Pay attention to the available hard disk space

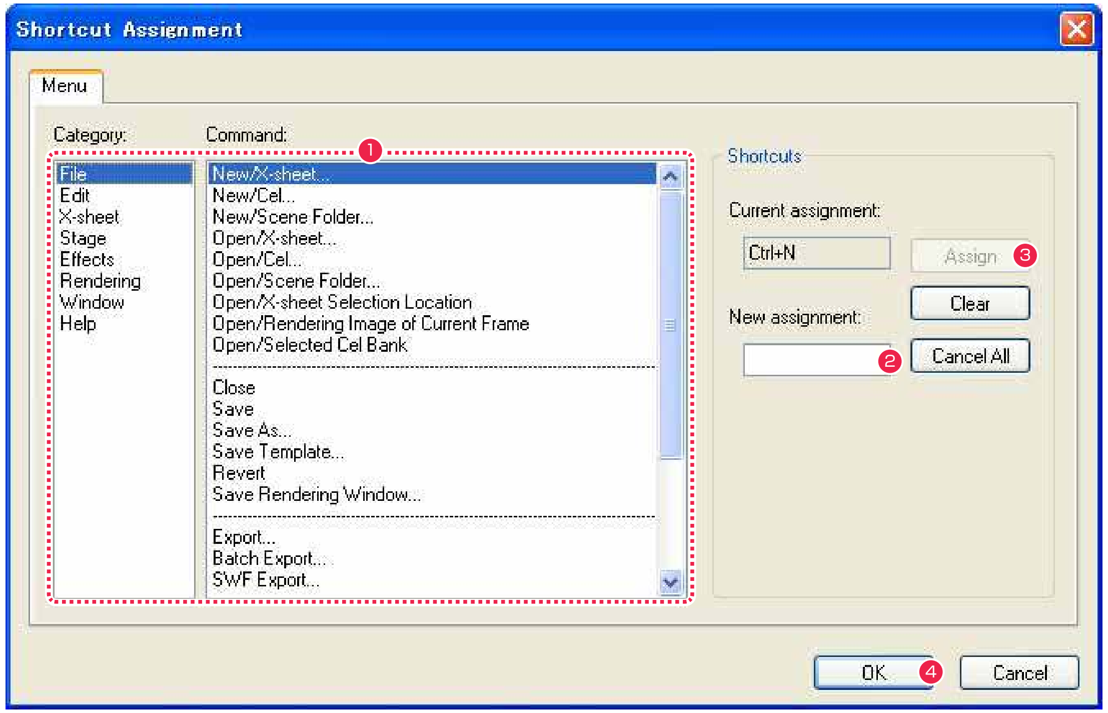
Be sure to check the [Available Space] on the HD drive to be specified as virtual memory folder location. If the specified HD drive does not have enough space, the program may become unstable.

Step: 02 Editing the keyboard shortcuts

Editable shortcuts are those of [Menu] items.

Assigning a keyboard shortcut

Select [Settings] > [Shortcut...] from the [Edit] menu. The Shortcut Assignment dialog box appears.


Shortcut Assignment
Menu
Category:
File
Edit
X-sheet
Stage
Effects
Rendering
Window
Help
Command:
New/X-sheet...
New/Cel...
New/Scene Folder...
Open/X-sheet...
Open/Cel...
Open/Scene Folder...
Open/X-sheet Selection Location
Open/Rendering Image of Current Frame
Open/Selected Cel Bank
Close
Save
Save As...
Save Template...
Revert
Save Rendering Window...
Export...
Batch Export...
SWF Export...
Shortcuts
Assign
Clear
New assignment:
Cancel All
OK
Cancel
①
②
③
④

Current assignment: Ctrl+N

① Select [Command] from [Category] for the item whose shortcut is to be edited.

② Click [New assignment] and enter the new keyboard shortcut from the keyboard.

③ Click [Assign] to enable the new keyboard shortcut.

④ Click [OK] to close the dialog.

Resetting a shortcut

To reset all changes and return to the default keyboard shortcut assignments, click [Cancel All].

POINT

If a shortcut is already assigned to another command

If a keyboard shortcut to be used is already assigned to another command, the new assignment overwrites the previous one.

Step: 03 Canceling and re-starting work

In this step, an explanation is given about the cancel and redo work.

Return 1 step(undo)

Undoes the previous operation. Multiple operations can be undone (Up to 20 operations. 100 operations only in the [X-sheet] window). Some operations may not be able to cancel.

Proceed 1 step(redo)

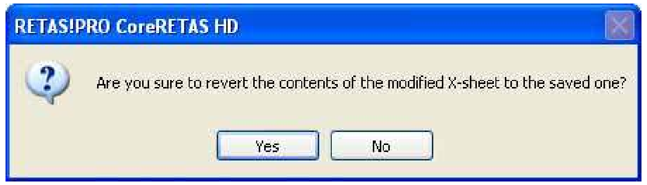
Redo the [Undo] operation. Multiple operations can be redone (Up to 20 operations. 100 operations only in the [X-sheet] window). Some operations may not be able to redo.

Select the command

To undo or redo, select [Return 1 Step][Proceed 1 Step][Undo] or [Redo] from the [Edit] menu.

Revert

Returns the content to the last saved one. Use this command to recover from a wrong operation or to discard all the changes made. Select [Revert] from the [File] menu.



RETAS!PRO CoreRETAS HD

Are you sure to revert the contents of the modified X-sheet to the saved one?

Chapter

8

Reference

This chapter introduces list of functions of CoreRETAS HD commands and user interface.

Step:01 Menus
Step:02 Windows
Step:03 Shortcuts
Step:04 Technical information
Step:05 Mouse and pen tablet operation
Step:06 Glossary
Step:07 User support
Step:08 Before contacting this company
Step:09 FAQ

Step: 01

Menus

In this step, an explanation is given about CoreRETAS HD menus.

File menu

- [New] -> [X-sheet...]
  This creates a new shooting X-sheet.
- [New] -> [Cel...]
  This creates a new cel.
- [New] -> [Scene Folder...]
  This creates a new cel scene folder.
- [Open] -> [X-sheet...]
  This loads a saved shooting X-sheet file (*.tsf).
- [Open] -> [Cel...]
  This loads a saved cel image.
- [Open] -> [Scene Folder...]
  This loads a saved scene folder.
- [Open] -> [X-sheet Selection Location]
  Opens the cel image of the position selected on the X-sheet.
- [Open] -> [Rendering Image of Current Frame]
  Opens the rendering image of the current frame.
- [Open] -> [Selected Cel Bank]
  Opens the cel image selected in the cel bank.
- [Template] -> ([Template Item])
  Opens a template item.
- [Template] -> [Browse Template Folder]
  Allows you to browse a template folder.
- [Most Recently Used Files]
  Opens the file that is most recently used.
- [Close]
  This closes the open window.
- [Save]
  This saves a shooting X-sheet or cel image that is open.
- [Save As...]
  This saves a shooting X-sheet or cel image that is open into a new file.
- [Save Template...]
  This saves a X-sheet as a template.
- [Revert]
  This reverts the open window to the status that is saved most recently.
- [Save Rendering Window...]
  This saves the content of the open [Rendering] window as an image file.
- [Export...]
  Exports data according to the settings of the X-sheet.
- [Batch Export...]
  Exports multiple saved X-sheets in a batch.
- [SWF Export...]
  Exports data in SWF format (Flash format) according to the settings of the X-sheet.
- [RAM Preview] -> [Apply]
  Previews data according to the settings of the X-sheet as a movie.
- [RAM Preview] -> [Apply Between Selected Frames]
  Previews frames selected on the X-sheet as a movie.
- [RAM Preview] -> [Settings...]
  Allows you to specify RAM preview settings.
- [RAM Preview] -> [Movie Export...]
  Exports a movie according to the settings of the X-sheet.
- [RAM Preview] -> [Clear Cache]
  Clears RAM preview data that is loaded.
- [Quit]
  Exits CoreRETAS HD.

Edit menu

- [Undo]
  Cancels the operation immediately before to restore the status.
- [Redo]
  Redoes the canceled operation immediately before to restore the status one step after.
- [Return 1 Step]
  Cancels the operation immediately before to restore the status.
- [Proceed 1 Step]
  Redoes the canceled operation immediately before to restore the status.
- [Cut]
  Clears the content of the selection and sends it to the clip board.
- [Copy]
  Sends the selection that is duplicated to the clip board.
- [Paste]
  Pastes the content that is sent to the clip board by [Cut] or [Copy] to the selected area.
- [Selective Paste...]
  Pastes selective parameters only.
- [Insert and Paste]
  Inserts frames of the number that is copied to the clip board before pasting.
- [Clear]
  Clears the content of the selected area.
- [Select All]
  Selects all the data cells. The meaning of "all the data cell" depends on the selected area.
- [Select Copied Range]
  Selects the area that is equivalent to the copied range in the clipboard.
- [Deselect]
  Cancels a selection.
- [Reverse Selection]
  Reverses the selection on the [Cel] window.
- [Select Foreground Color]
  Selects the foreground color on an image in the [Cel] window.
- [Add Foreground Color to Selection]
  Adds the range of foreground color to the selection on the image in the [Cel] window.
- [Select Other than Foreground Color]
  Selects the area other than the foreground color on the image in the [Cel] window.
- [Select Out-of-Range Color]
  Selects the area that is out of the range of NTSC standard color range on the image in the [Cel] window.
- [Expand Selection...]
  Expands the selection by the specified width on the [Cel] window.
- [Reduce Selection...]
  Reduces the selection by the specified width on the [Cel] window.
- [Fill]
  Fills the selected area with the foreground color on the image in the [Cel] window.
- [Airbrush Effect]
  Applies airbrush effect on the selection on the image in the [Cel] window.
- [Replace Line Color]
  Replaces the part drawn with a color except transparent in the selection with the [Foreground Color].
- [Transform] -> [Scale...]
  Applies scale effect on the selection on the image in the [Cel] window.
- [Transform] -> [Rotate...]
  Applies rotate effect on the selection on the image in the [Cel] window.
- [Transform] -> [Flip Horizontal]
  Applies flip horizontal effect on the selection on the image in the [Cel] window.
- [Transform] -> [Flip Vertical]
  Applies flop vertical effect on the selection on the image in the [Cel] window.
- [Load to Light Table] -> [X-sheet Selection Location]
  Loads the selection on the X-sheet to the light table.

- [Load to Light Table] -> [Current Frame Rendering Image]
  Loads the drawing in the current frame to the light table.

- [Load to Light Table] -> [Selected Cel Bank]
  Loads the selected cel bank to the light table.

- [Settings] -> [Shortcut...]
  Allows you to edit assignments of keyboard shortcuts.

- [Settings] -> [Preferences...]
  (In Mac OS X: [Application] menu -> [Preferences...]
  Allows you to configure the settings.

X-sheet menu

- [Parameter Settings...]
  Allows you to specify various parameters of pegbar and layer in the [Parameter Settings] dialog box.

- [Cel Number Auto Input...]
  Automatically inputs cel numbers to the selection in the X-sheet.

- [Cel Auto Arrange...]
  Using the frame numbers assigned to the image file, automatically arranges the image loaded in the cel bank to the X-sheet.

- [Frame] -> [Insert]
  Inserts the number of selected frames to the X-sheet.

- [Frame] -> [Insert (Specify Number)...]
  Allows you to specify a number of frames when inserting frames to the X-sheet.

- [Frame] -> [Delete]
  Allows you to delete the selected frames from the X-sheet.

- [Layer] -> [Insert...]
  Allows you to insert a layer to the X-sheet.

- [Layer] -> [Delete]
  Allows you to delete a layer from the X-sheet.

- [Layer] -> [Copy...]
  Allows you to copy a layer in the X-sheet.

- [Layer] -> [Rename...]
  Allows you to rename a layer in the X-sheet.

- [Layer] -> [Reset]
  Resets the parameter values of the layer in the X-sheet to the default values.

- [Pegbar] -> [Insert...]
  Allows you to insert a pegbar to the X-sheet.

- [Pegbar] -> [Delete]
  Allows you to delete the current pegbar from the X-sheet.

- [Pegbar] -> [Rename...]
  Allows you to rename the current pegbar in the X-sheet.

- [Cel Bank] -> [Insert...]
  Allows you to insert new cel banks before and after the current cel bank.

- [Cel Bank] -> [Delete]
  Allows you to delete the current cel bank.

- [Cel Bank] -> [Rename...]
  Allows you to rename the current cel bank.

- [Cel Bank] -> [Renumber Cel...]
  Allows you to change the number of a cel selected in the Cel Bank.

- [Cel Bank] -> [Select Layer Image...]
  Allows you to select a PSD image of the cel bank.

- [Cel Bank] -> [Select All Layer Images...]
  Allows you to select all PSD images of the cel bank.

- [Cel Bank] -> [Load Plane...]
  Allows you to load a color plane in the cel bank.

- [Cel Bank] -> [Plane Settings...]
  Allows you to configure the settings of the color plane loaded in the cel bank.

- [Cel Bank] -> [Resolution Settings...]
  Allows you to configure the settings resolution of the layer image to load in the cel bank.

- [Sound] -> [Load...]
  Allows you to load an audio file to the sound layer of the X-sheet.

- [Sound] -> [Delete]
  Allows you to delete an audio file from the sound layer of the X-sheet.

- [Sound] -> [Play]
  Plays an audio file loaded in the sound layer of the X-sheet.

- [Sound] -> [Stop]
  Stops playing an audio file loaded in the sound layer of the X-sheet.

- [Sound] -> [Offset...]
  Moves (offset) the frame to start playing of an audio file loaded in the sound layer of the X-sheet.

- [Sound] -> [Info...]
  Displays information of the audio file loaded in the sound layer of the X-sheet.

- [Key Frames] -> [Continuous Key Frame Settings]
  Allows you to configure [Continuous Key Frame] to the data cells selected in the X-sheet.

- [Key Frames] -> [Non-continuous Key Frame Settings]
  Allows you to configure [Non-continuous Key Frame] to the data cells selected in the X-sheet.

- [Key Frames] -> [Continuous Key Frame Settings (All)]
  Allows you to configure [Continuous Key Frame] to all the parameters of the data cells selected in the X-sheet.

- [Key Frames] -> [Non-continuous Key Frame Settings (All)]
  Allows you to configure [Non-continuous Key Frame] to all the parameters of the data cells selected in the X-sheet.

- [Key Frame] -> [Unset]
  Allows you to unset key frame that is specified to the data cell selected on the X-sheet.

- [Apply Inbetweening]
  Allows you to apply inbetweening of a key frame according to the settings.

- [Create Motion Path from Key Frames]
  Creates a motion path that links the key frames in the selected range in the X-sheet.

- [Calculation...]
  You can calculate any values to the parameters of the selected data cell.

[Invert Sheet]
Inverts the parameters of the selected data cell to the timing.

[Align Center]
Sets the pegbar center to the center of the image.

[To First Frame]
Moves the current frame to the first frame in the X-sheet.

[To Last Frame]
Moves the current frame to the last frame in the X-sheet.

[Call Up Frame...]
Moves the current frame to the specified frame in the X-sheet.

[Call Up Current Frame]
Displays the current frame at the center of the X-sheet.

[Sheet View] -> [Standard] [Small]
Allows you to select the size X-sheet is displayed.

- [Collapse Sheet]
  Collapses all [Sub Cel Layer], [Effect Layer], [Sound Layer] that are currently expanded in the X-sheet.

- [Expand Sheet]
  Expands only layers with input among all [Sub Cel Layer], [Effect Layer], [Sound Layer] that are currently collapsed in the X-sheet.

- [Sheet Settings] -> [General...]
  Allows you to specify general information related to X-sheet.

- [Sheet Settings] -> [Camera Clipping Settings...]
  Allows you to specify the camera clipping position in the X-sheet.

- [Sheet Settings] -> [Info...]
  Allows you to configure information that is displayed on the board (information displayed at the top of the scene when recording) of the X-sheet.

- [Sheet Settings] -> [Memo...]
  You can record a brief note about the X-sheet.

Stage menu

- [View] -> [Front] [Top] [Side] [Camera]
  Allows you to switch display angle of each layer arranged in the current frame.

- [Standard View]
  Resets the display on the [Stage] window to the default status.

- [Image]
  Displays the image loaded in the layer in the current frame on the [Stage] window.

- [Outline]
  Displays the outline of the image loaded in the layer in the current frame on the [Stage] window.

- [All Key Frames] -> [Position] [Scale] [Rotation] [Center]
  Displays all key frames that the current pegbar or the current layer have and that meets the selected subcommand on the [Stage] window.

- [All Frames]
  Displays all frames that the current pegbar or the current layer have on the [Stage] window.

- [Frame Track]
  Displays all tracks that the current pegbar or the current layer have on the [Stage] window.

- [Motion Path]
  Displays the motion path on the [Stage] window.

- [Show Pegbar]
  Displays a pegbar mark that indicates vertical direction on outside of the current pegbar or current layer of the [Stage] window.

- [Show Grid]
  Displays grid on the [Stage] window.

- [Show Manipulator]
  Displays the manipulator on the [Stage] window.

- [Play]
  Plays the image on the [Stage] window according to the [Stage] menu settings.

- [Stop]
  Stops playing the image on the [Stage] window.

- [16/1 View] [8/1 View] [4/1 View] [2/1 View] [1/1 View] [1/2 View] [1/4 View] [1/8 View] [1/16 View] [1/32 View] [1/64 View]
  Scales the view in the [Stage] window to the selected scale.

Effects menu

- [Add Effect]
  Add the effect that is applied immediately before.

- [Add] -> [Ver. 5 Compatible]
  You can select and add the following effect.
  [Gaussian Blur V5][Corner Pin V5][Noise V5][Focus V5][Mosaic V5][Alpha Blur V5][Shadow V5][Invert V5][Light Blur V5]

- [Add] -> [Blur]
  You can select and add the following effect.
  [Blur (Heavy)][Blur (Light)][Gaussian Blur][Channel Blur][Focus][Box Blur][Alpha Blur][Motion Blur][Soft Blur][Partial Blur][Partial Radial Blur][Radial Blur]

- [Add] -> [Coloring]
  You can select and add the following effect.
  [Gradation Paint][Paraffin Overlay][Tint][Color Replace]

- [Add] -> [Distortion]
  You can select and add the following effect.
  [Pinch][Image Distort][Image Distort 2][Corner Pin][Zigzag][Swirl][Sphere][Fisheye][Fisheye 2][Mirror][Polar Coordinates][Ripple]

- [Add] -> [Light]
  You can select and add the following effect.
  [BG Light][Backlight][Backlight 2]
  [Cross Light][Diffusion][Glow]
  [Lens Flare][Shadow][Volume Light]

- [Add] -> [Noise]
  You can select and add the following effect.
  [Noise][Pinhole][Fractal Noise]

- [Add] -> [Sharpen]
  You can select and add the following effect.
  [Unsharp Mask][Sharpen (Heavy)][Sharpen (Light)]

- [Add] -> [Tone Adjustment]
  You can select and add the following effect.
  [Monorization][HSV][RGB][Color Blance][Contrast][Level Adjust][Posterization][Invert][Tone Curve][Brightness]

- [Add] -> [Others]
  You can select and add the following effect.
  [Alpha][Smoothing][Text][Mask Replace][Mosaic]

- [Delete]
  Deletes the selected effect (effect layer) from the current layer.

- [Delete All]
  Deletes all effects (effect layer) from the current layer.

- [Save Effects Set]
  Saves the effect set layer loaded in the sheet as an effect set into the palette.

Rendering menu

- [Rendering of Current Frame]
  Composites the image data loaded in the current frame according to the X-sheet settings and rendering to the [Rendering] window.

- [Quick Rendering]
  If you select this, composites the image data loaded in the current frame according to the X-sheet settings and rendering to the [Rendering] window when the X-sheet settings are changed.

- [RGB View]
  Displays the image rendering in the [Rendering] window in RGB.

- [Alpha View]
  Displays alpha channel of the image rendering in the [Rendering] window.

- [Copy to Clipboard]
  Copies the image rendering in the [Rendering] window to the clipboard.

- [Rendering Settings...]
  Allows you to specify settings related to rendering in the [Rendering] window.

- [Clear Cache]
  Clears the cache generated by rendering to the [Rendering] window.

Window menu

- [New Window]
  This allows you to open the same X-sheet in multiple [X-sheet] windows.

- [Arrange Palettes] -> [Arrange]
  Returns the palettes to the positions saved with [Save Current Position].

- [Arrange Palettes] -> [Arrange to Default Position]
  Returns the palettes to their default positions.

- [Arrange Palettes] -> [Save Current Position]
  Saves the current positions of the palettes.

- [Scale] -> [Zoom In]
  Enlarges the view.

- [Scale] -> [Zoom Out]
  Reduces the view.

- [Scale] -> [Fit on Screen]
  The scale is adjusted so that the whole screen view is shown in the [Cel] window.

- [Scale] -> [Actual Pixels]
  In this screen view, the image pixels are matched to screen pixels 1:1.

- [Stage]
  Displays the [Stage] window.

- [Rendering Window]
  Displays the [Rendering] window.

- [Export Queue]
  Displays the [Export Queue] window.

- [Cel Bank]
  Displays the [Cel Bank] palette.

- [Layer Settings]
  Displays the [Layer Settings] palette.

- [Inbetweening]
  Displays the [Inbetweening] palette.

- [Motion Path]
  Displays the [Motion Path] palette.

- [Effects]
  Displays the [Effects] palette.

- [File Browser]
  Displays the [File Browser].

- [Status Bar] (Windows)
  Displays the [Status Bar].

- [Progress Bar] (Mac OS X)
  Displays the [Progress Bar].

Help menu (Windows)

- [Version Information...]
  Shows version information of modules that comprise CoreRETAS HD, data size, serial number, link to CELSYS website, etc.

CoreRETAS HD menu (Mac OS X)

- [About CoreRETAS HD...]
  Shows the splash of CoreRETAS HD.

- [Version Information...]
  Shows version information of modules that comprise CoreRETAS HD, data size, serial number, etc.

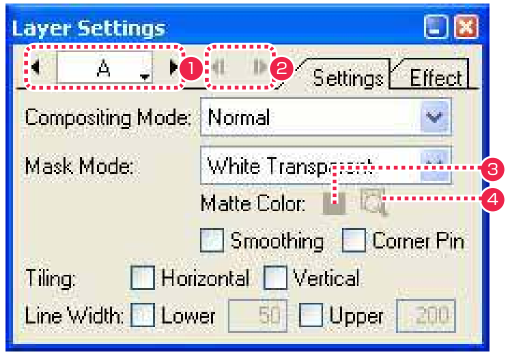
Step: 02

Windows

In this step, an explanation is given about CoreRETAS HD windows.

Layer settings palette

[Layer Settings] palettes allows you to specify unique attributes of each layer.



Compositing Mode: Normal
Mask Mode: White Transparent
Matte Color:
☐ Smoothing ☐ Corner Pin
Tiling: ☐ Horizontal ☐ Vertical
Line Width: ☐ Lower 50 ☐ Upper 200

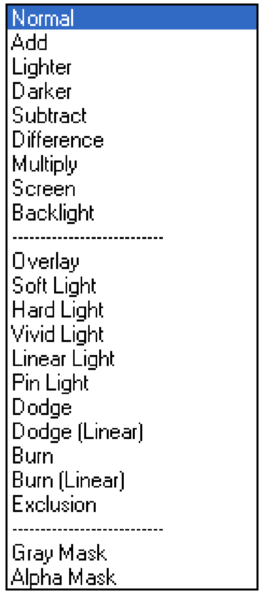
❶ [Select Layer] button
Click a layer name to get a pop-up menu and switching layer to operate. You can also switch the layer to operate using the left or right arrow.

❷ [Switch Effect] button
When more than one effect is registered in the current layer, you can switch effect settings of the effect tab.

- [Settings] tab
When the [Effect] tab is selected, this allows you to switch to the [Settings] tab.

- [Effect] tab
This allows you to specify settings of various effects on the layer of the X-sheet.

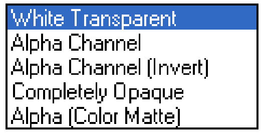
- [Compositing Mode] menu
Allows you to specify the compositing mode of the layer. Because compositing mode of the parent cel layer is applied to a sub cel layer, you cannot apply a compositing mode different from that of the parent's.


Normal
Add
Lighter
Darker
Subtract
Difference
Multiply
Screen
Backlight

Overlay
Soft Light
Hard Light
Vivid Light
Linear Light
Pin Light
Dodge
Dodge (Linear)
Burn
Burn (Linear)
Exclusion

Gray Mask
Alpha Mask

- [Mask Mode] menu
Allows you to specify mask to the layer.


White Transparent
Alpha Channel
Alpha Channel (Invert)
Completely Opaque
Alpha (Color Matte)

For the types of [Mask Mode] and [Compositing Mode], see [Mask Mode] and [Compositing Mode] in [Chapter 4 Application Description: Shooting].

❸ [Select Matte Color] button
This button allows you to select the color you want to use as the matte color.

❹ [Detect Matte Color] button
Detects the matte color from the top image that is loaded in the cel bank of the selected layer.

- [Smoothing]
Adjusts jagged edges of the layer and converts to lines with smooth gradation. Generally, this is called "anti-alias" process.

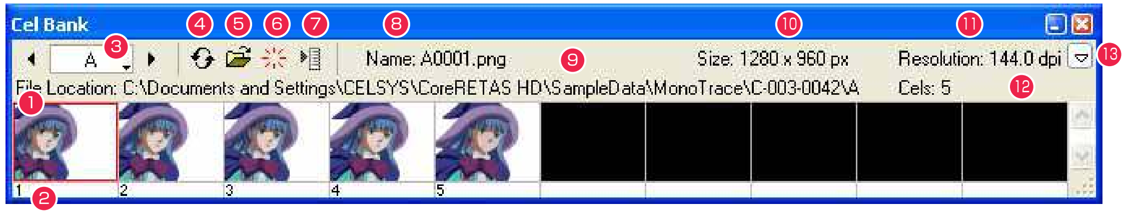
- [Corner Pin]
Allows you to drag control points (vertices on the four corners of the image) that are displayed on the [Stage] window to transform the image.
This is not available when [Tiling] is selected.

- [Tiling]
Allows you to get a effect to align the image of the layer repeatedly in the horizontal or vertical direction. This is mainly used for flowing background etc. This is not available when [Corner Pin] is selected.

- [Line Width]
Allows you to specify the lower and upper limit the line width of the image of the layer. (Vector only)

Cel bank palette

This is a palette to load image files and display thumbnails on a layer (cel layer) basis of the X-sheet.
You can show/hide this palette using [Cel Bank] in the [Window] menu. The cel bank that is selected for operation by the [Select Cel Bank] button in the [Cel Bank] palette is called the current cel bank.



Name: A0001.png

Size: 1280 x 960 px

Resolution: 144.0 dpi

File Location: C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-003-0042\A

Cels: 5

① [Thumbnail Display] area
This area displays the image thumbnails that are loaded in the cel bank.
Clicking a thumbnail shows a red rim on the selected thumbnail and you can check the information on the selected file.

② [Cel Number]
A cel number is displayed at the lower left of each thumbnail. This cel number is a serial number that is assigned to each image in the specified folder and is not directly related to the filename.

③ [Select Cel Bank] button
Click a layer name to get a pop-up menu and switching layer to operate in cel bank. You can also switch the layer to operate using the left or right arrow.
This is not linked to the [X-sheet] window, [Stage] window, or the select layer button in the [Layer Settings] palette.

④ [Refresh] Button
Refreshes the information of the image loaded in the cel bank to the latest information. If you start PaintMan HD and modify the image while you are using CoreRETAS HD, you can reflect the change immediately.

⑤ [Load...] button
Loads the image to the cel bank that is currently selected. You can connect more than one layer to one cel bank to share easily.

⑥ [Delete] Button
Deletes the image that is loaded to the cel bank and is currently selected.

⑦ [Show Menu] button
Displays the [Cel Bank] menu.

⑧ [Filename]
Shows the filename of the selected image.

⑨ [File Path]
Shows the file path of the selected image.

⑩ [Image Size]
Shows the size of the selected image. (Unit: pixel)

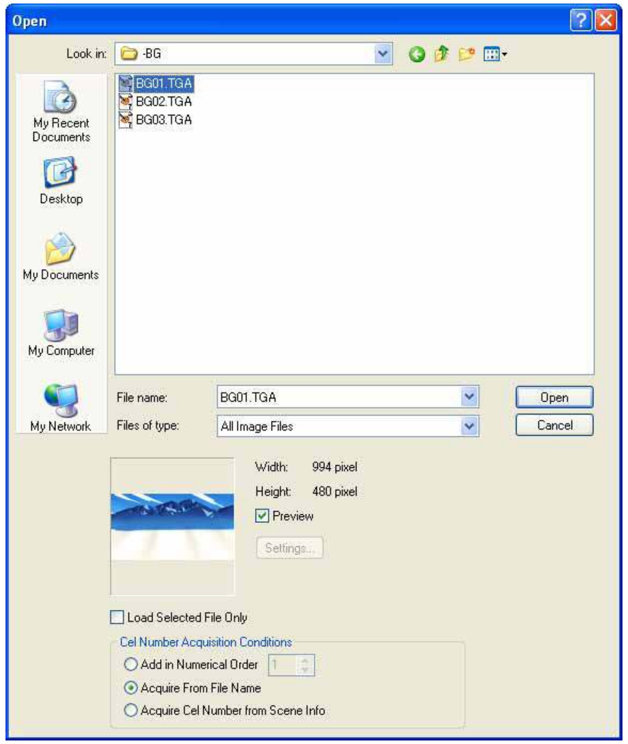
⑪ [Resolution]
Shows the resolution of the selected image. (Unit: dpi)

⑫ [Cels]
Shows the number of imaged that are loaded in the cel bank that is currently displayed.

⑬ [Enlarge/Reduce Cel Bank] button
Clicking the button reduces the cel bank to the lower position and hides the thumbnail display area. Click it again to restore.

[Open] dialog box

This is displayed when you press the [Load...] button in the [Cel Bank] palette.



Look in: BG

File name: BG01.TGA

Files of type: All Image Files

Width: 994 pixel

Height: 480 pixel

☑ Preview

☐ Load Selected File Only

Cel Number Acquisition Conditions

○ Add in Numerical Order 1

● Acquire From File Name

○ Acquire Cel Number from Scene Info

- [Preview]
  Allows you to switch whether the preview image of the image file should be displayed or not.

- [Load Selected File Only]
  Allows you to load only the selected images in the cel bank.

- [Cel Number Acquisition Conditions]
  Select the cel number acquisition conditions from below.

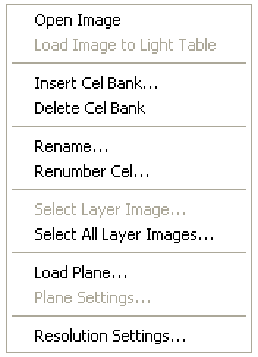
[Add in Numerical Order]
Cel number is assigned in the numerical order.
[Acquire From File Name]
Cel number is acquired from the file name.
[Acquire Cel Number from Scene Info]
Cel number is acquired from the scene information.

- [Files of type]
  Select the file format of the image to be loaded from the pop-up menu.
  Only images in the format specified in the pop-up menu are displayed in the file list.

- [All Image Files]
  All files whose image formats are supported by CoreRETAS HD are displayed.

- [Open]
  Loads all images in the folder that contains the selected image and closes the [Open] dialog box.
  (When [Load Selected File Only] is ON, only the selected files are loaded)

Cel bank menu

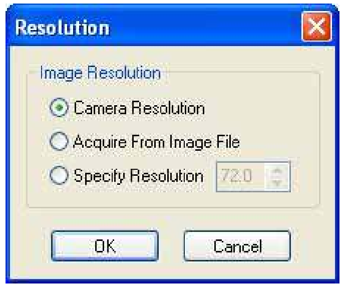

Open Image
Load Image to Light Table
Insert Cel Bank...
Delete Cel Bank
Rename...
Renumber Cel...
Select Layer Image...
Select All Layer Images...
Load Plane...
Plane Settings...
Resolution Settings...

- [Open Image]
  Opens the image of the cel bank in the [Cel] window.
- [Load Image to Light Table]
  Loads the image of the cel bank in the light table of the [Cel] window.
- [Insert Cel Bank...]
  Allows you to insert new cel banks before and after the current cel bank.
- [Delete Cel Bank]
  Allows you to delete the current cel bank.
- [Rename...]
  Allows you to rename the current cel bank.
- [Renumber Cel...]
  Allows you to change the number of a cel selected in the Cel Bank.
- [Select Layer Image...]
  Allows you to select a PSD image of the cel bank.
- [Select All Layer Images...]
  Allows you to select all PSD images of the cel bank.
- [Load Plane...]
  Allows you to load a color plane in the cel bank.
- [Plane Settings...]
  Allows you to configure the settings of the color plane loaded in the cel bank.
- [Resolution Settings...]
  Allows you to configure the settings resolution of the layer image to load in the in the cel bank.

Cel bank resolution settings dialog box

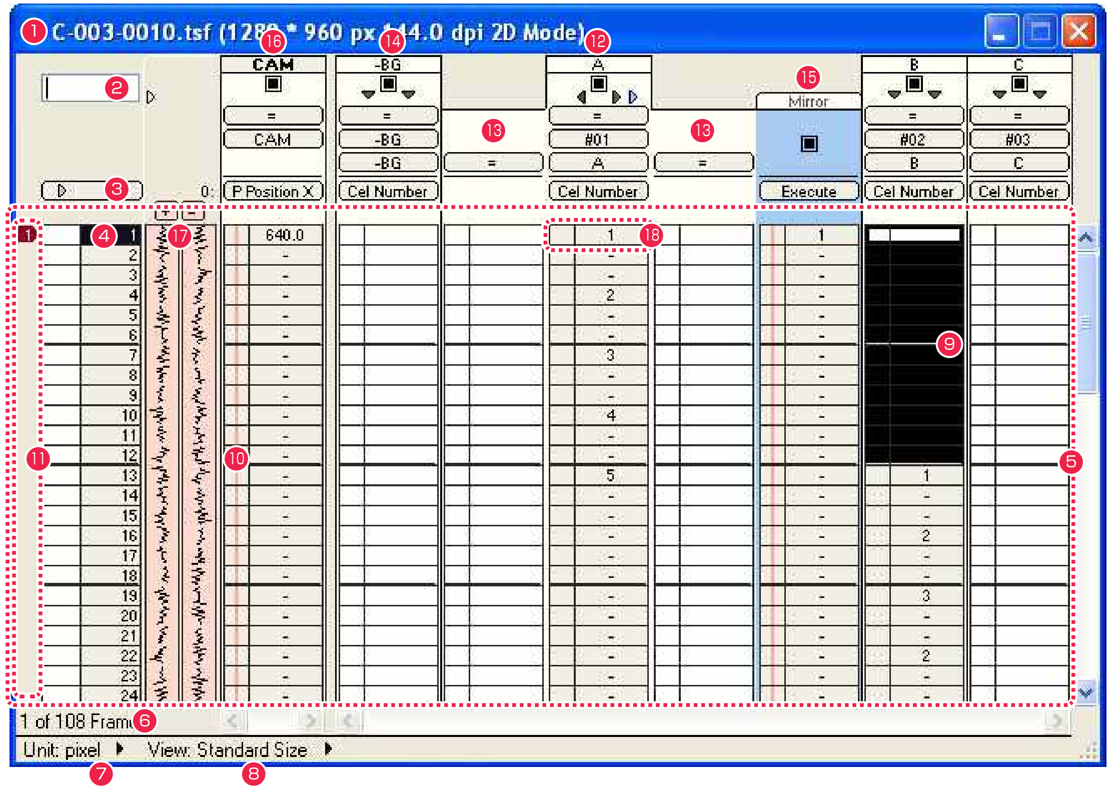
Allows you to specify the resolution of the images that are loaded in the cel bank.

Right-click on the [Cel Bank] palette (other than text display areas) or click the [Show Menu] button to display the [Cel Bank] menu. Selecting [Resolution Settings...] from the menu shows the [Resolution] dialog box.
(You can also select [Cel Bank] > [Resolution Settings...] from the [X-sheet] menu to open the [Resolution] dialog box.


Resolution
Image Resolution
● Camera Resolution
○ Acquire From Image File
○ Specify Resolution 72.0
OK
Cancel

- [Camera Resolution]
  Allows you to use the resolution specified in the [X-sheet Settings] dialog box.
- [Acquire From Image File]
  Allows you to use the resolution (DPI) that is recorded in the image file itself.
- [Specify Resolution]
  Allows you to enter resolution (DPI).

Shooting X-sheet window



① **X-sheet Name (title bar)**
The X-sheet name is the filename of the X-sheet file stored in the disk.
You can as many X-sheets as you have memory.

② **Parameter Input field**
This is a field to enter parameter values.
You can use only numbers and decimal point Press the Enter key to confirm.
When you enter into the X-sheet, use numeric keypad.

③ **Sync button**
If you change the [Select Input Parameter] menu of a layer when this button in ON, Select Input Parameter menu of other layers are also switched.
However, because [Camera Layer] does not have [Cel Number] and [Transparency] parameters, so they it is not changed when these parameters are selected in another layer. Also, [Effect Layer] is not synchronized.

④ **Frame Number Display area**
This column displays the frame numbers.
The frame you are currently working on in the [Stage] window is called the [Current Frame] and is shown highlighted.
You can select the frame number display from [Seconds + Frame], [Feet], [Frames], and [Page, Frame number]

⑤ **Sheet area**
The area where input fields are aligned.

⑥ **Current Frame information**
Examples: 1 / 108 frames
The total number of frames in the X-sheet is 108 and the current frame is the 1st frame.

⑦ **Unit Information menu**
You can select the unit of the coordinate parameters from [pixel], [mm], and [inch].

⑧ **View Size menu**
You can select the view size of the shooting X-sheet from below:
- Standard size
- Small size

⑨ **Selection**
Selection is an area in the X-sheet where a data area is selected and is shown highlighted. You can select multiple lines and columns.
This area is operated by input from the input box, auto inbetweening, and cut & paste. The Selection can be moved using the arrow keys.

⑩ **Key Frame area**
This is an area to display key frames. The key frame area cannot be selected by itself, but always be selected with the adjacent data cell.

⑪ **Marker area**
Displays marker.
Markers are used to mark frame numbers in the X-sheet.
You can use 10 markers from 1 to 0.

⑫ **Cel Layer**
This layer is for loading the inbetweens.

⑬ **Sub Cel Layer**
This is a layer that are subordinative to the [Cel Layer].
This is mainly used for loading combined cel.
The sub cel layer to the left of the [Cel Layer] is called the [Lower Cel], and the one to the right is called [Upper Cel].
Because [Sub Cel Layer] cannot have any parameters except cel number, you cannot select [Select Input Parameter] menu.

⑭ **BG (Background) Layer**
The functions of the [BG Layer] are the same as those of [Cel Layer]. Just the names are different.
Normally, specify [Completely Opaque] to use this layer.

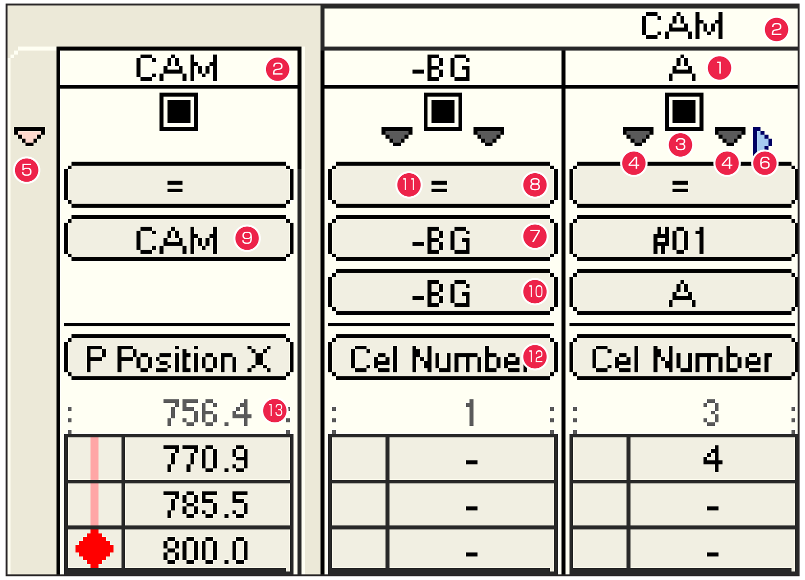
⑮ **Effect Layer**
This is a layer to apply image processing to the [Cel Layer](BG Layer) and [Camera Layer].

⑯ **Camera Layer**
This is a layer for controlling camera work.
Not like [Cel Layer], this layer does not have [Cel Number] and [Transparency] parameters.

⑰ **Sound Layer**
This layer is for loading the sound.

⑱ **Data Cell**
This area is the smallest unit to input data.

Shooting X-sheet window header



① Layer Title bar
Shows the name of the layer.
Click the layer title bar to set the clicked layer to the current layer.

② Camera Title bar
When more than one [Camera Layer] is created, the [Camera Layer] name is displayed on each cel layer.

③ Cel Layer switch
In the case of a [Cel Layer] or [BG Layer], you can exclude the layer from rendering by setting the Cel Layer switch off. In the case of an [Effect Layer], filter effect is turned off.

④ Sub Cel Layer switch
Clicking this switch expands the [Sub Cel Layer] (upper cel and lower cel) to left and right to show them. Click it again to close the [Sub Cel Layer].

⑤ Sound Layer switch
Clicking this switch expands the [Sound Layer] to show it. Click it again to close the [Sound Layer]. The [Sound Layer] shows the sound save of the registered audio.

⑥ Effect Layer switch
Clicking this switch expands the [Effect Layer] to the right to show it. Click it again to close the [Effect Layer].

⑦ Select Pegbar menu
Allows you to select to which pegbar the layer is connected.
A "pegbar" is to group layers.
Layers that are connected to the same pegbar share values of P position X, P position Y, P position Z, P scale X, P scale Y, P rotation, P center X, and P center Y. Therefore, when a pegbar is moved, layers that are connected to the same pegbar moves accordingly.

⑧ Select Parent Pegbar menu
Allows you to select to which parent pegbar the pegbar is connected as a child pegbar.
The child pegbar is converted to the parent pegbar`s relative coordinates. When connection to the parent pegbar is canceled, it returns to the absolute coordinates.

⑨ Camera Pegbar
Camera pegbar is a pegbar that is connected to the [Camera Layer] when a new X-sheet is created.
Although the name is different, its functions are same as those of other pegbars. You can connect the [Camera Layer] to a pegbar other than the camera pegbar, but connect the [Camera Layer] to the camera pegbar if there is no special reason because it may be confusing. In any cases, the clipping area of the camera (the area that is reflected on the drawing window eventually) is determined by the pegbar to which the [Camera Layer] is connected.

⑩ Select Cel Bank menu
Allows you to select to which cel bank the layer is connected.
The [Cel number] input for the layer corresponds to the number assigned to the cel in the connected cel bank one-to-one.

⑪ Empty Cel Bank
Empty cel bank is a pre-provided [cel bank to which no image is loaded]. This is shown as "=".
Layers that are connected to the empty cel bank are not displayed on the stage even if [Cel number] is input, nor it is drawn.

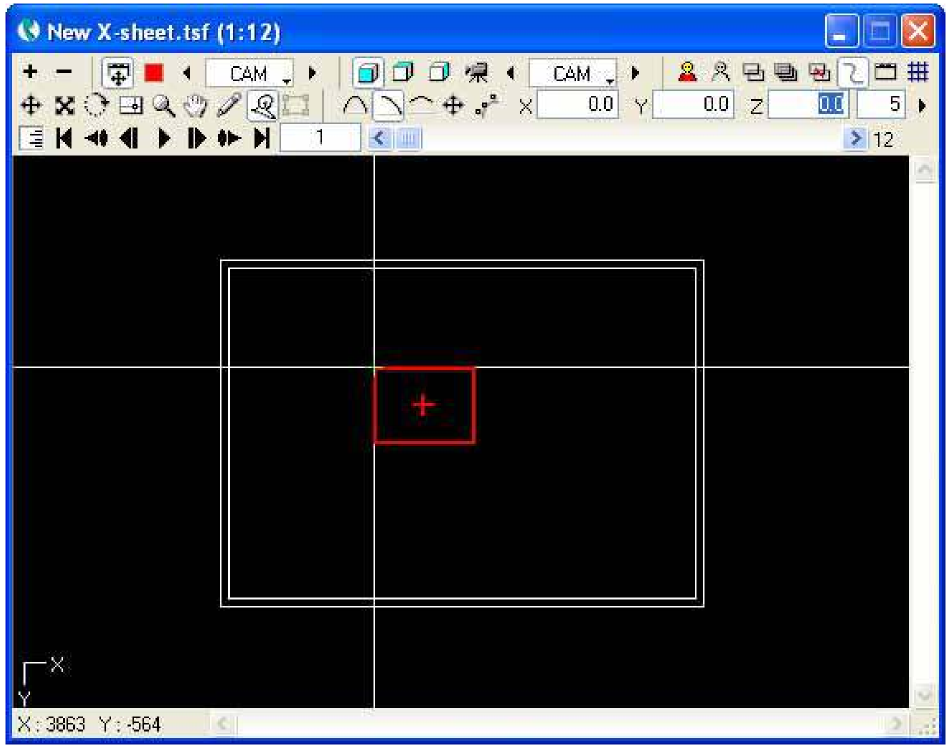
Sub cel layers (upper cel and lower cel) and the [Effect Layer] (that uses the cel bank) are connected to the empty cel bank by default.

⑫ Select Input Parameter menu
Allows you to switch which parameter you are going to input for each pegbar or layer.

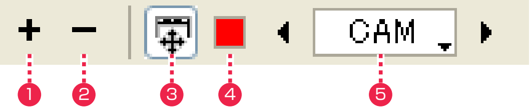
⑬ Adjacent Value Display Area
If the same value continues, "-" (hyphen) is shown in the X-sheet.
You can check the value of the frame right before the frame that is shown on the top of the sheet area in the adjacent value display area.
This is convenient because you can check the number without scrolling the sheet even when "-" is continuing.

Stage window

[Stage] window corresponds to a camera stand and you can check and change the positions of the camera and cel and scale of the current frame. The intersection of the horizontal and vertical lines displayed in the stage area is the origin of the stage coordinates (world coordinates).
You can change the horizontal and vertical lines by [Settings] -> [Preferences...] -> [Stage] -> [Stage Size] of the [Edit] menu.



Screen view menu



① [Zoom In]
Enlarges the display of the [Stage] window.

② [Zoom Out]
Reduces the display of the [Stage] window.

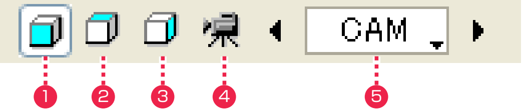
③ [Pegbar Edit/Layer Edit] button
Switches either [Pegbar] or [Layer] is to be operated.
The concept of "pegbar" is introduced in RETAS!PRO and grouping of layers (cel) is on the base.
If there is not special reason, always select "pegbar" to do camera work.
"Layer" is a special operation that is used when you want to move (offset) the layer position to the pegbar.
Do not use "Layer" except for scenes that cannot process without the offset feature of "Layer".

④ [Pegbar Color]
The layer (image) that is connected to the pegbar to be operated is shown on the stage with a colored frame specified in the color selection box. Clicking the color selection box opens color picker that allows you to change the color.

⑤ [Select Pegbar/Layer] button
Allows you to select the "pegbar" (in pegbar edit) or "layer" (in layer edit) to be operated.
Click the button to open a pop-up menu. There, select the desired pegbar or layer. The layer shown in bold is the layer connected to the "current pegbar". Because "sub cel layer", "effect layer", etc. cannot have an offset value, you cannot select them using this button.

3D camera angle selection menu

Allows you to check the positions of the camera and cel by switching the stage view when operating 3D camera work.



① [Front View]
Image is shown from the view point at the front (XY plain view).

② [Top View]
Image is shown from the view point at the top (XZ plain view).

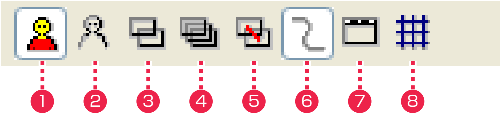
③ [Side View]
Image is shown from the view point at the side (YZ plain view).

④ [Camera View]
The image that is projected on the camera screen is displayed without clipping by the camera area (The movement directions of the cel/camera are X, Y, and Z directions of the camera coordinates).

⑤ [Camera View list]
Select the camera for [Camera View].

Select view mode menu

Switches the view mode on the stage.



① [Image] button
Displays the image loaded in each layer on the [Stage] window.

② [Outline] button
Shows the outline of the image.

You cannot set both view modes ① and ② ON.
When sheets are nested, outlines and images in the nested X-sheet are not shown.

③ [All Key Frames] button
Shows all key frames that the current pegbar or current layer has.
Key frames of displayed parameter depends on the selected tool.

④ [All Frames] button
Displays all frames of the current pegbar or the current layer on the [Stage] window.
You cannot set both ③ and ④ buttons ON at the same time.

⑤ [Frame Track] button
Shows the track of the current pegbar or current layer.
Frame track is shown as lines that connect the center point of the current pegbar or current layer.

⑥ [Motion Path] button
Shows the track drawn by the Create Path tool.

⑦ [Show Pegbar] button
Displays a pegbar mark that indicates vertical direction on outside of the current pegbar or current layer.

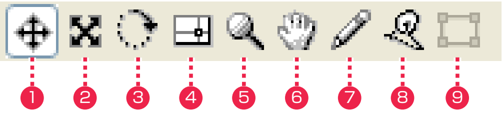
⑧ [Show Grid] button
Shows the grid.

POINT

Select [Standard Size] from the [Stage] menu. The view on the stage is reset to the default status.

Tool menu

Switches the item to be operated by mouse.



① [Move] button
Allows you specify the pegbar or layer position.

② [Scale] button
Allows you specify the pegbar or layer scale.

③ [Rotation] button
Allows you specify the pegbar or layer rotation.

④ [Center] button
Allows you specify the center position of the pegbar or layer.
"Center" is the origin of the coordinates of the pegbar or layer, and at the same time, the center of the "rotation" and "scale".

⑤ [Zoom] button
Enables enlarging/reducing the stage.
Click the area you want to enlarge to enlarge the image centering around the position you clicked.
Click the area you want to reduce while you press [Alt]/[Opt] key to reduce the image centering around the position you clicked.

⑥ [Hand] button
Drag the displayed area to scroll.

⑦ [Create Path] button
Allows you to draw motion path track.

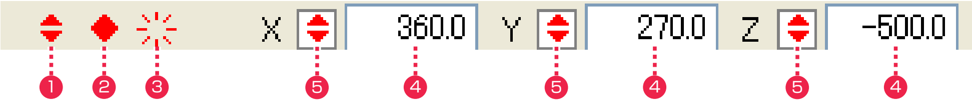
⑧ [Path Reshaping] button
Allows you to transform the tracks you have drawn using the [Create Path] tool.

⑨ [Corner Pin] button
Allows you to set a corner pin.

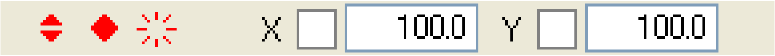
Tool settings menu

This is shown when you select the [Tool] menu on the [Stage] window.

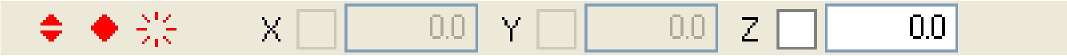
[Move Tool Settings] menu



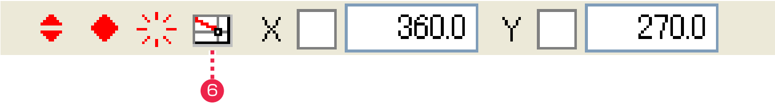
[Scale Tool Settings] menu



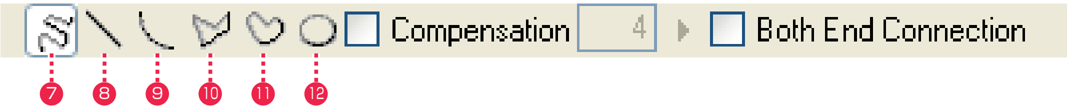
[Rotate Tool Settings] menu



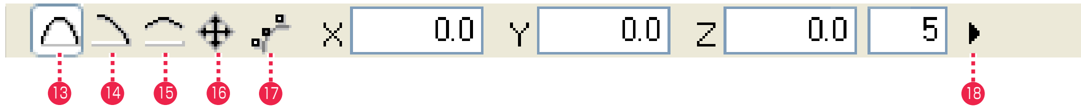
[Center Tool Settings] menu



[Create Path Tool Settings] menu



[Path Reshaping Tool Settings] menu



[Zoom] tool, [Hand] tool, and [Cornerpin] tools do not have tool setting menus.

① [Non-continuous Key Frame Settings] button
Allows you to set [Non-continuous Key Frame] to the current frame.

② [Continuous Key Frame Settings] button
Allows you to set [Continuous Key Frame] to the current frame.

③ [Delete Key Frame] button
Allows you to delete the key frame that is set to the current frame.

④ Number Input field
You can directly enter values for the position (X, Y, Z), scale (X, Y), rotation, and center of the pegbar or layer to be operated. Click the input field and enter values using the keyboard. Use [Enter] key to fix the value.
You can move to the next input field using [Tab] key. You can move to the previous input field using [Shift] + [Tab] key.

⑤ Key Frame Display field
The input field to the left of the input field is the input field for the key frame. However, you cannot directly select the key frame input field only.

⑥ [Center Relative View] button
Shows the relative position to the center before operation (center tool).

⑦ [Free Curve] button
Allows you to draw free curve when creating a path.

⑧ [Line] button
Allows you to draw lines when creating a path.

⑨ [Curve] button
Allows you to draw curves when creating a path.

⑩ [Polyline] button
Allows you to draw polylines when creating a path.

⑪ [Continuous Curve] button
Allows you to draw continuous curves when creating a path.

⑫ [Ellipse] button
Allows you to draw ellipses when creating a path.

- [Compensation]
Allows you to apply compensation to the free curve when creating a path.

- [Both End Connection]
Allows you to connect both ends of the line when creating a path.

⑬ [Both Ends Fixed] button
Fixes both ends of the line when reshaping a path.

⑭ [One End Fixed] button
Fixes one end of the line when reshaping a path.

⑮ [Both Ends Free] button
Frees both ends of the line when reshaping a path.

⑯ [Parallel Movement of Whole Line]
Moves the entire line parallel when reshaping a path.

⑰ [Move Control Point] button
when reshaping a path, the control point is used.

⑱ [Intensity of Reshaping] button
Allows you to specify the intensity when reshaping a path. You can also select from the buttons to the right.

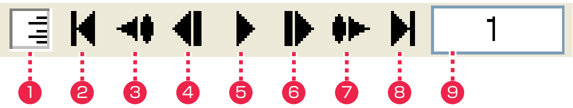
POINT

Setting and deleting key frames

Usually, key frames of all items selected by the Sync [X Y Z] selection button on the [Inbetweening] palette are set/deleted. Select the number input field while pressing [Shift] key and click the button, the key frame is set (deleted) to the item that is currently selected. This allows you to "set key from to X value only", etc.

Frame control panel

This is a panel to control the current frame.



① Indicator
Shows the progress of rerendering in the [Stage] window with a green indicator. While this indicator is working, CoreRETAS HD is rerendering the [Stage] window. Wait until rendering is finished.

② [To First Frame] button
Jumps to the first frame.

③ [To Previous Key Frame] button
Moves to the previous key frame.

④ [To Previous Frame] button
Moves to the previous frame.

⑤ [Play/Stop] button
Plays/stops continuous display of frames.

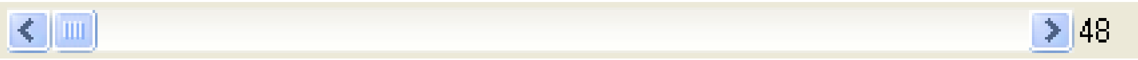
⑥ [To Next Frame] button
Moves to the next frame.

⑦ [To Next Key Frame] button
Moves to the next key frame.

⑧ [To Last Frame] button
Jumps to the last frame.

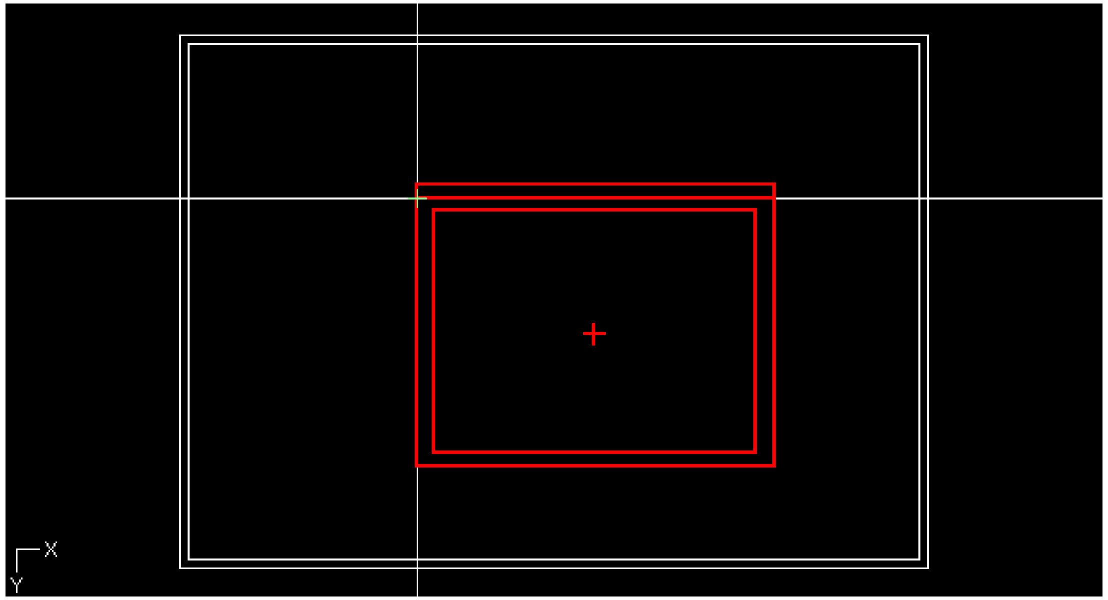
⑨ [Current Frame Display] area
Shows the frame number of the current frame. You can click and enter a numeric value to directly call the desired frame. Press [Enter] to fix.
Input "64" to jump to the 64th frame.
When the view mode is "Seconds + frames", you can Input "5+10" to jump to the 10th frame in the fifth second.

Frame slider



This is a slider to control the current frame continuously.
Drag the slider to move the current frame accordingly.
Move the slider to the far left end to jump to the first frame of the X-sheet.
Move the slider to the far right end to jump to the last frame of the X-sheet.

Stage area



This is an area that shows arrangement of pegbar and layer.
The outer frame of each layer (image) is shown as a rectangle area enclosed by colored lines.
The color of the frame can be changed in the [color selection box].

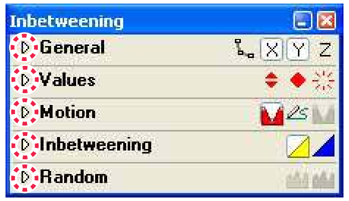
- When [Pegbar] is selected
  Layers that are connected to the same pegbar are all shown with frames of the same color.
  All layers that are connected to the pegbar selected by the [Select Pegbar/Layer] button are shown with bright and bold frame.
  All layers that are connected to the pegbar that is not selected by the [Select Pegbar/Layer] button are shown with dark and thin frame.

- When [Layer] is selected
  Layers that are connected to the same pegbar are all shown with frames of the same color.
  Layers that are selected by the [Select Pegbar/Layer] button are shown with bright and bold frame.
  Layers that are not selected by the [Select Pegbar/Layer] button are shown with dark and thin frame.

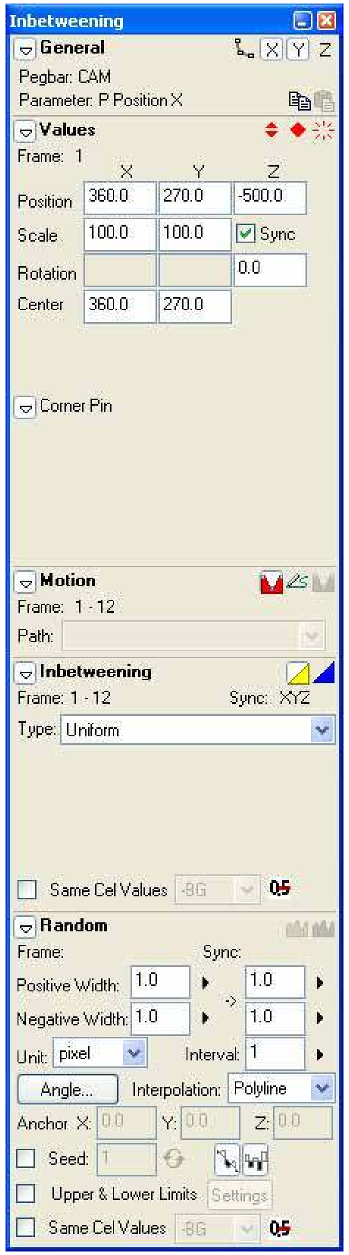
- Center
  The center of the camera and cel are shown by "+".

Inbetweening palette

Select [Inbetweening] from the [Window] menu to open the [Inbetweening] Palette.



Click the triangle to expand each pane.



Pegbar: CAM
Parameter: P Position X
Frame: 1

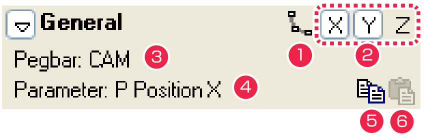
	X	Y	Z
Position	360.0	270.0	-500.0
Scale	100.0	100.0	☑ Sync
Rotation			0.0
Center	360.0	270.0	

Motion
Frame: 1 - 12
Path:

Inbetweening
Frame: 1 - 12 Sync: XYZ
Type: Uniform
☐ Same Cel Values -BG 0.5

Random
Frame: Sync:
Positive Width: 1.0 -> 1.0
Negative Width: 1.0 1.0
Unit: pixel Interval: 1
Interpolation: Polyline
Anchor X: 0.0 Y: 0.0 Z: 0.0
☐ Seed: 1
☐ Upper & Lower Limits
☐ Same Cel Values -BG 0.5

[General] pane



Pegbar: CAM
Parameter: P Position X

① [Auto Refresh] button
Allows you to select ON/OFF of auto refresh.

② Sync [X Y Z] buttons
Allows you to select either X, Y, Z parameters are synchronized or separately inbetweened.

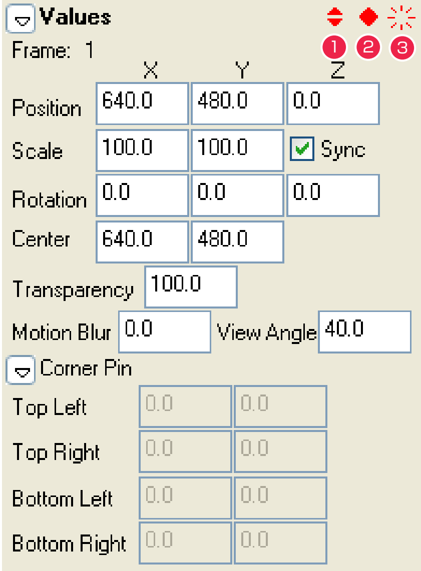
③ [Layer]
Shows the name of the layer that you can edit.

④ [Parameter]
Shows the type of the parameter that is currently selected.

⑤ [Copy Inbetweening Settings] button
Copies the inbetweening settings.

⑥ [Paste Inbetweening Settings] button
Pastes the inbetweening settings.

[Values] pane



Frame: 1

	X	Y	Z
Position	640.0	480.0	0.0
Scale	100.0	100.0	☑ Sync
Rotation	0.0	0.0	0.0
Center	640.0	480.0	

Transparency 100.0
Motion Blur 0.0 View Angle 40.0

Corner Pin		
Top Left	0.0	0.0
Top Right	0.0	0.0
Bottom Left	0.0	0.0
Bottom Right	0.0	0.0

Corner pin parameters are available only when [Corner Pin] on the [Layer Settings] palette is ON.

① [Non-continuous Key Frame Settings] button
Allows you to configure [Non-continuous Key Frame] to the frame of the layer whose [Data Cell] is selected in the X-sheet.

② [Continuous Key Frame Settings] button
Allows you to configure [Continuous Key Frame] to the frame of the layer whose [Data Cell] is selected in the X-sheet.

③ [Delete Key Frame] button
Allows you to delete the key frame specified to the frame of the layer whose [Data Cell] is selected in the X-sheet.

- [Frame]
  Shows the frame number of the layer that is currently selected.
  Example: Because the first frame is currently selected, [1] is displayed.

- [Position]
  Shows the coordinates of the frame that is currently selected. You can enter numeric values to move the item.

- [Scale]
  Shows the frame size. You can enter a numeric value to set.

- [Sync]
  When changing the frame size the aspect ratio is maintained.

- [Rotation]
  Shows the angle of rotation. You can enter a numeric value to set.

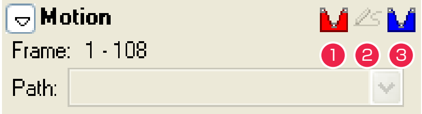
- [Center]
  Shows the coordinates of the center of the frame that is currently selected. You can enter a numeric value to move the frame.

- [Transparency]
  (When a parameter other than [P (pegbar)] is selected)
  Shows the transparency of the frame image that is currently selected. You can enter a numeric value to set.

- [Motion Blur]
  (When a parameter other than [P (pegbar)] is selected)
  Shows the level of blur of motion to a direction. You can enter a numeric value to set.

- [View Angle]
  (When camera layer is selected in [3D X-sheet])
  Shows the range that the camera can capture. You can also enter a numeric value in the "10" - "170" range.

[Motion] pane



Frame: 1 - 108

Path:

You can select ON/OFF of buttons ① and ② by clicking them.

① [Auto Spline] button
Joins the section between two [Non-continuous Key Frame]s into one spline section and connect sections around [Continuous Key Frame]s in the section smoothly.

② [Motion Path] button
Joins the section between two [Non-continuous Key Frame]s into one motion path section and apply inbetweening of positions along the path created in [Motion Path] palette.

③ [Apply Spline Inbetweening] button
Makes the section between two [Non-continuous Key Frame]s selected in the X-sheet into one spline section and applies inbetweening.

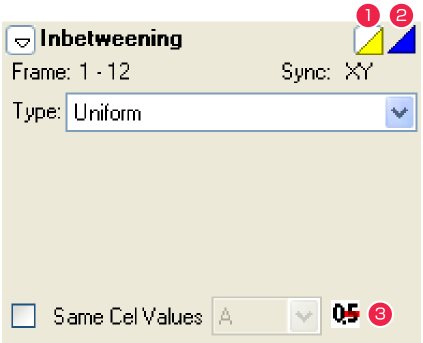
- [Frame]
  Shows the range from the beginning to the end to which [Non-continuous Key Frame] is set.
- [Path]
  Allows you to select the path created by [Motion Path] palette when the [Motion Path] button is ON.

POINT

[Auto Spline] button and [Apply Spline Inbetweening] button

The [Auto Spline] button saves settings for each section between [Continuous Key Frame]s, applies inbetweening for each section, and the positions of [Continuous Key Frame]s are not changed after inbetweening. However, [Apply Spline Inbetweening] button does not save inbetweening settings, apply inbetweening to the section between [Non-continuous Key Frame]s according to the settings in the [Inbetweening] pane regardless of the [Continuous Key Frame]s, and the positions of the [Continuous Key Frame]s are changed after each inbetweening.

[Inbetweening] pane



Frame: 1 - 12 Sync: XY

Type: Uniform

☐ Same Cel Values A

You can select ON/OFF of ① and ③ by clicking them.

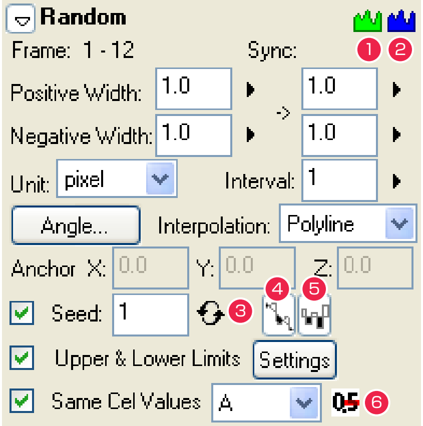
① [Auto Inbetweening] button
When this is set ON, the range to be edited becomes [Auto Inbetweening Section] and auto inbetweening is applied.

② [Apply Inbetweening] button
When the [Auto Inbetweening] button is OFF, clicking this button changes the value of the section to be edited on the X-sheet. When the [Auto Inbetweening] button is ON, inbetweening is applied again.

- [Frame]
  Shows the range from where two key frames are set. [Non-continuous Key Frame] and [Continuous Key Frame] are not distinguished.
- [Sync]
  Shows the coordinate parameters that are currently in sync.
- [Type]
  Allows you to select the type of inbetweening from the pull-down menu. The default is [Uniform].
- [Same Cels Values]
  After inbetweening, continuous frames with same cel number are assigned same value. When this is selected, you can select the reference layer.

③ [Round Figures Below Decimal Point] button
Rounds the coordinates below decimal point to the integral number.

[Random] pane



Frame: 1 - 12 Sync:

Positive Width: 1.0 1.0

Negative Width: 1.0 1.0

Unit: pixel Interval: 1

Interpolation: Polyline

Anchor X: 0.0 Y: 0.0 Z: 0.0

☑ Seed: 1

☑ Upper & Lower Limits

☑ Same Cel Values A

You can apply random effects to the inbetweening track. You can specify a section regardless of key frames and overlap the section with other sections.

① [Auto Random Inbetweening] button
When this is set ON, the range to be edited becomes [Auto Random Section] and the value on the X-sheet changes. When this is set OFF, [Auto Random Section] will be canceled.

② [Apply Random Inbetweening] button
When the [Auto Random Inbetweening] button is off, applies random inbetweening to the section to be edited and changes the value on the X-sheet.

- [Frame]
  Shows the range where [Auto Random Section] is set. [Non-continuous Key Frame] and [Continuous Key Frame] are not related.
- [Sync]
  Shows the coordinate parameters that are currently in sync.
- [Positive Width]
  Specify the width of shake to the positive direction at the start and end of the [Random Section].
- [Negative Width]
  Specify the width of shake to the negative direction at the start and end of the [Random Section].
- [Unit]
  Allows you to select a [Unit] "pixel", "mm", and "inch".
- [Angle...] button
  Click to open the [Angle Settings] dialog box.
  When XYZ sync is set, you can specify whether the shake should be random or to a certain direction only and, when the shake is in one direction, specify the direction.
  See [Inbetweening/Follow] for the [Angle Setting] dialog.
- [Interval]
  Specify the interval of the shake width in the [Random Section].
- [Interpolation]
  Specify the interpolation method of the shake in the [Random Section].
- [Anchor]
  Shows and sets the anchor position by XYZ coordinates. This is shown when the [Auto Random Inbetweening] button is ON.
- [Seed]
  If you enter the same value as before, the same random numbers are generated. If you set this OFF, different random numbers are generated each time.

③ [Random Setting of Seed Value] button
A different seed value is generated each time you click this.

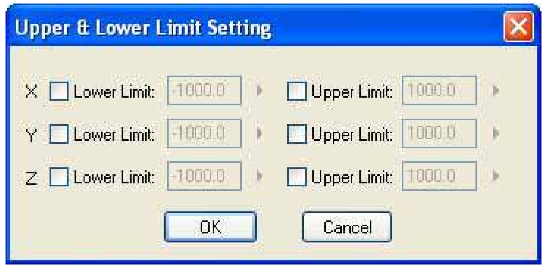
④ [Relative Input] button
Add the random number to the current value or writes this random value to the X-sheet. This is available when the [Auto Random Inbetweening] button is OFF.

⑤ [Generate Positive and Negative Alternately] button
Generate positive and negative random numbers alternately. When this is set OFF, positive and negative may be disproportionate.

- Upper & Lower Limits [Settings] button
  Click to open the [Upper & Lower Limits Settings] dialog box.
- [Same Cels Values]
  After inbetweening, continuous frames with same cel number are assigned same value. When this is selected, you can select the reference layer.

⑥ [Round Figures Below Decimal Point] button
Rounds the coordinates below decimal point to the integral number.

[Upper & Lower Limit Setting] dialog box



Upper & Lower Limit Setting

X ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

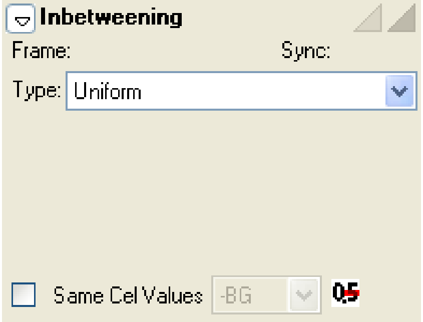
Y ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

Z ☐ Lower Limit: -1000.0 ☐ Upper Limit: 1000.0

- X, Y, Z [Lower Limit]
  Specify the lower limit of the shake in the [Auto Random Section].
- X, Y, Z [Upper Limit]
  Specify the upper limit of the shake in the [Auto Random Section].

Inbetweening type menu

Uniform

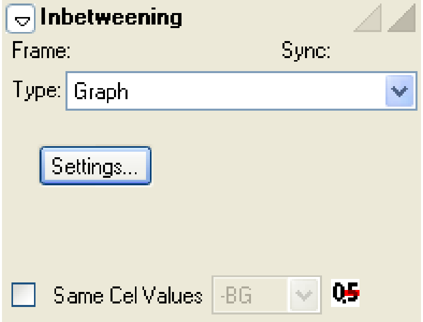


Type: Uniform

Inbetweening
Frame:
Sync:
☐ Same Cel Values
-BG
0.5

Applies inbetweening at the fixed variation.

Graph



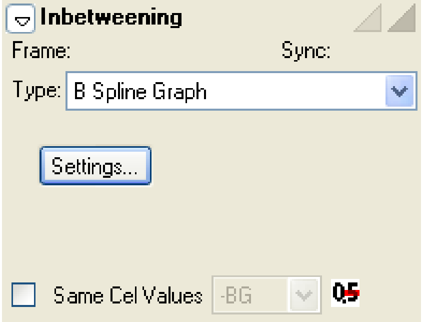
Type: Graph

Inbetweening
Frame:
Sync:
Settings...
☐ Same Cel Values
-BG
0.5

You can specify the variation freely by editing the graph.

- [Settings...] button
  Click to open the [Graph Inbetweening Settings] dialog box.

B Spline Graph



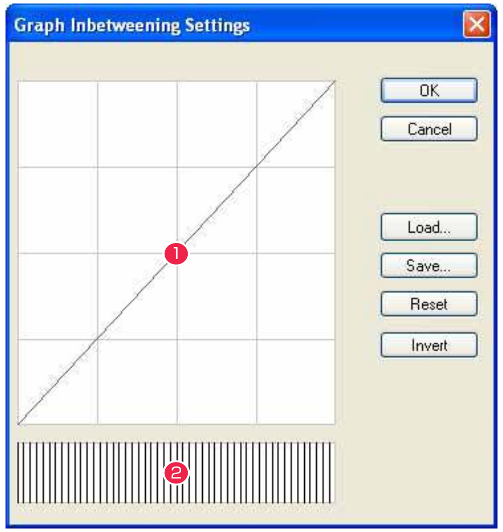
Type: B Spline Graph

Inbetweening
Frame:
Sync:
Settings...
☐ Same Cel Values
-BG
0.5

You can specify the variation freely by editing the B spline graph.

- [Settings...] button
  Click to open the [Graph Inbetweening Settings] dialog box.

- [Graph Inbetweening Settings] dialog box



① Graph area
Allows you to edit the variation graph. The horizontal axis indicates time and the vertical axis indicates the variation. The default status of the graph (when it is reset) is a upward-sloping straight line. This represents "Uniform".
You can click any point to add a control point. Drag the control point to change the curve.

② Speed check area ("Graph" only)
This area shows the specified acceleration and deceleration in a easily comprehensible way.

- [Load...] button
  Loads the [Graph Setting] saved as a [Inbetweening Graph] file (extension *.ibf6).

- [Save...] button
  Saves the current settings as a [Inbetweening Graph] file (extension *.ibf6).

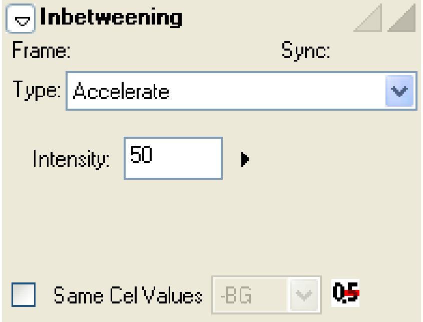
- [Reset] button
  Deletes all control points and resets to uniform.

- [Invert] button
  Inverts the specified curve. When acceleration is specified and the curve is inverted, it is decelerated at the exactly same rate.

- [Cancel] button
  Cancels the settings and closes the dialog box.

- [OK] button
  Finishes settings.

Accelerate

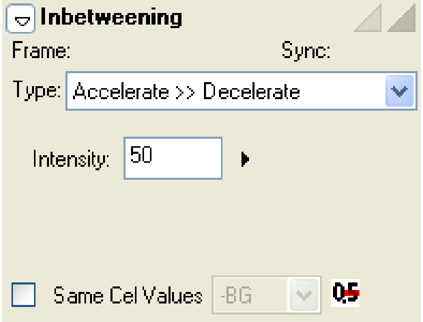


Type: Accelerate
Intensity: 50
☐ Same Cel Values

The variation increases. This is mainly used for cushion when the camera or cel starts moving.

- [Intensity]
  Specify the variation of inbetweening.

Accelerate >> Decelerate

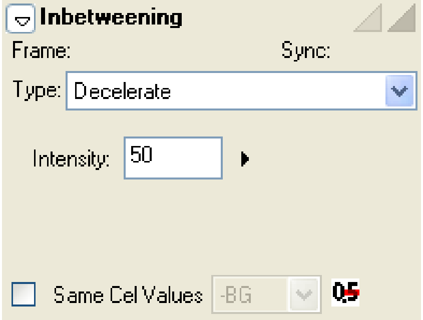


Type: Accelerate >> Decelerate
Intensity: 50
☐ Same Cel Values

The variation increases from the frame in which it starts moving to the intermediate frame. From the intermediate frame to the last frame, the variation decreases. This is mainly used for PAN.

- [Intensity]
  Specify the variation of inbetweening.

Decelerate

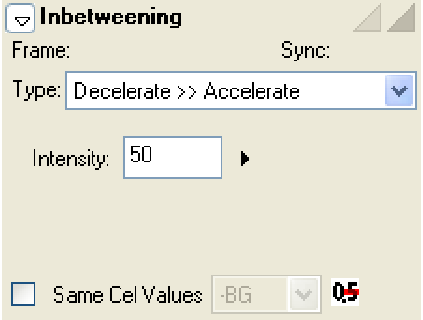


Type: Decelerate
Intensity: 50
☐ Same Cel Values

The variation decreases. This is mainly used for cushion when the camera or cel stops.

- [Intensity]
  Specify the variation of inbetweening.

Decelerate >> Accelerate

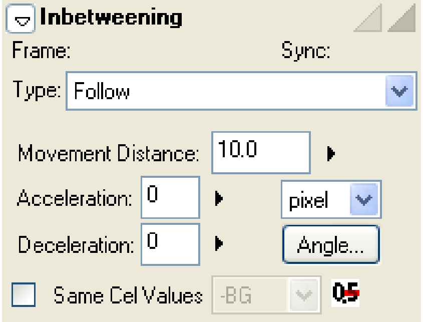


Type: Decelerate >> Accelerate
Intensity: 50
☐ Same Cel Values

The variation decreases from the frame in which it starts moving to the intermediate frame. From the intermediate frame to the last frame, the variation increases. This inbetweening gives an impression that the middle part is packed. This setting is used rather for "variation of transparency" than for camera work etc.

- [Intensity]
  Specify the variation of inbetweening.

Follow



Inbetweening
Frame: Sync:
Type: Follow
Movement Distance: 10.0
Acceleration: 0 pixel
Deceleration: 0
☐ Same Cel Values -BG 0.5

Specify the start Position only. Do not specify the end position. If you specify the movement distance, movement angle, number of acceleration frames, and number of deceleration frames, the data moves by the [Movement Distance] at every frame except acceleration frames and deceleration frames. Specify a combination of X, Y, Z direction vectors and distance.

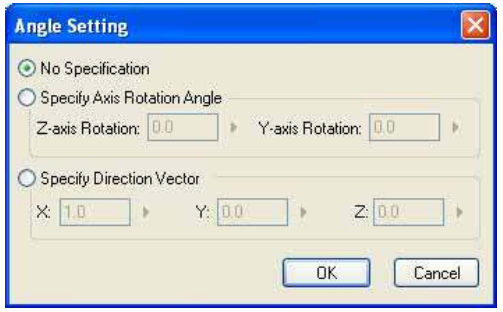
- [Movement Distance]
  Specify the movement distance of inbetweening. You can select a [Unit] "pixel", "mm", and "inch".

- [Acceleration]
  Specify the number of acceleration frames.

- [Deceleration]
  Specify the number of deceleration frames.

- [Angle...] button
  Click to open the [Angle Settings] dialog box.

- [Angle Seting] dialog box



Angle Setting
● No Specification
○ Specify Axis Rotation Angle
Z-axis Rotation: 0.0 Y-axis Rotation: 0.0
○ Specify Direction Vector
X: 1.0 Y: 0.0 Z: 0.0

- [No Specification]
  Angle setting is not specified.

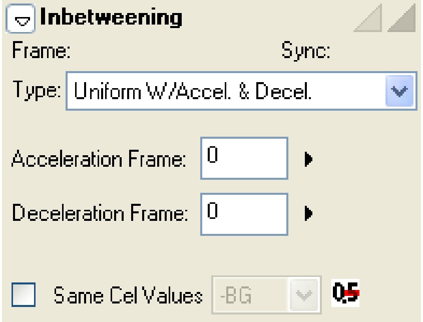
- [Specify Axis Rotation Angle]
  Specify the angle around the Z-axis and Y-axis.

- [Specify Direction Vector]
  Specify X, Y, Z vector direction. It can be specified in the "-20.0" - "20.0" range.

- [OK] button
  Finishes settings.

- [Cancel] button
  Cancels the settings and closes the dialog box.

Uniform W/Accel. & Decel.



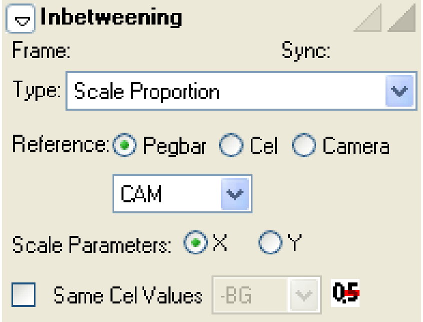
Inbetweening
Frame: Sync:
Type: Uniform W/Accel. & Decel.
Acceleration Frame: 0
Deceleration Frame: 0
☐ Same Cel Values -BG 0.5

Specify the number of acceleration frames and deceleration frames. Frames between the start and end points are equally spaced. The speed at the first and end point is 0.

- [Acceleration Frame]
  Specify the number of acceleration frames.

- [Deceleration Frame]
  Specify the number of deceleration frames.

Scale Proportion



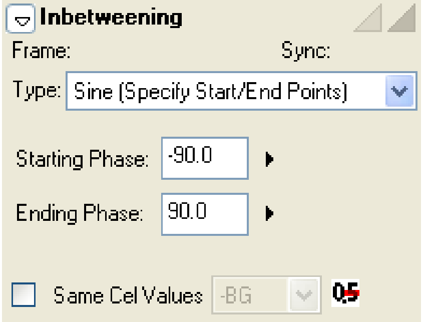
Inbetweening
Frame: Sync:
Type: Scale Proportion
Reference: ● Pegbar ○ Cel ○ Camera
CAM
Scale Parameters: ● X ○ Y
☐ Same Cel Values -BG 0.5

The speed is proportional to the scale. When the scale is large, the speed changes a lot and when the scale is little, the speed changes a little. This can be used when "simulating Z-direction movement with a two-dimensional camera" as well as "zooming of camera".

- [Reference]
  Select from "pegbar", "cel", and "camera".

- [Scale Parameters]
  Select from X and Y.

Sine (Specify Start/End Points)



Inbetweening

Frame: Sync:

Type: Sine (Specify Start/End Points)

Starting Phase: -90.0

Ending Phase: 90.0

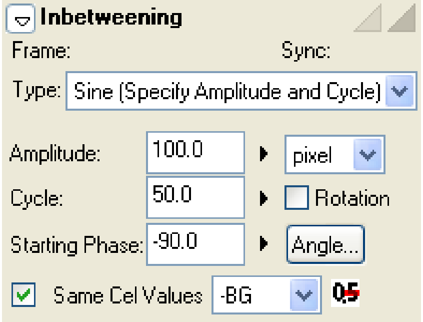
☐ Same Cel Values -BG

Applies sine function based on the phase at the starting and ending points.

- [Starting Phase]
  Specify the phase of the starting point.

- [Ending Phase]
  Specify the phase of the ending point.

Sine (Specify Amplitude and Cycle)



Inbetweening

Frame: Sync:

Type: Sine (Specify Amplitude and Cycle)

Amplitude: 100.0 pixel

Cycle: 50.0 ☐ Rotation

Starting Phase: -90.0 Angle...

☑ Same Cel Values -BG

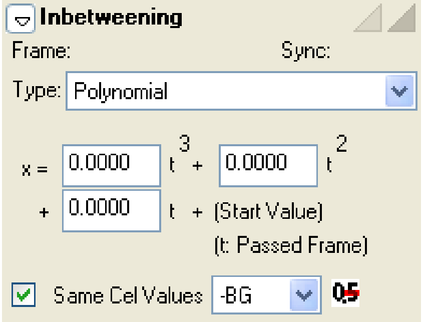
You can apply inbetweening that has a constant amplitude and cycle based on the sine curve. Specify the starting point only. The position of the ending point is determined according to the settings.

- [Amplitude]
  Specify the amplitude. You can select a [Unit] "pixel", "mm", and "inch".
  Example: If "1000" pixel is specified, the amplitude changes in the range of "-500" - "+500".

- [Cycle]
  Specify the cycle in which the phase of the sine curve goes round by the frame.
  Example: If "100" is specified, the phase goes round in "100" frames.

- [Starting Phase]
  Specify the phase of the starting point.

Polynomial



Inbetweening

Frame: Sync:

Type: Polynomial

$x = 0.0000\,t^3 + 0.0000\,t^2 + 0.0000\,t$ + (Start Value)

(t: Passed Frame)

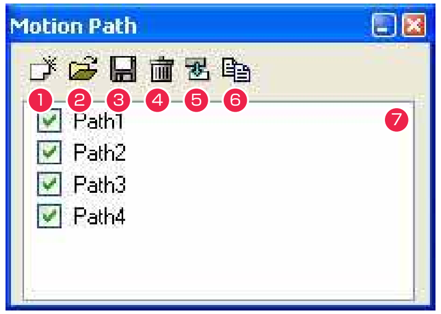
☑ Same Cel Values -BG

When the value of the key frame to start inbetweening is d, the number of frames from the key frame is t, x that meets the following formula is assigned as the result of inbetweening:
$X = at^3+bt^2+ct+d$

For example, if a = 0, b = y, and c = 10, $X = -t^2+10t+d$.
Therefore, the movement goes forward and stops at halfway, and accelerates backward.

Motion path palette

You can specify the movement track of camera or pegbar by writing a curve on the stage and save it. The curve is called [Motion Path]. Multiple motion paths can be saved for each X-sheet. The [Motion Path] palette manages [Motion Path]s.



① [New Path] button
Creates a new path. The created path is listed in the display area.

② [Load Path from File] button
Loads path data from a [Motion Path] file (*.mtp6) in to the display area.

③ [Save Path as File] button
Saves the path data selected in the display area into a [Motion Path] file (*.mtp6).

④ [Delete Path from List] button
Deletes a unnecessary path from the display area.

⑤ [Rename Path] button
Renames the selected path.

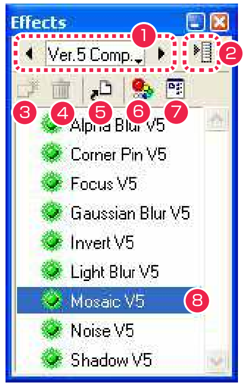
⑥ [Copy Path] button
Copies the selected path.

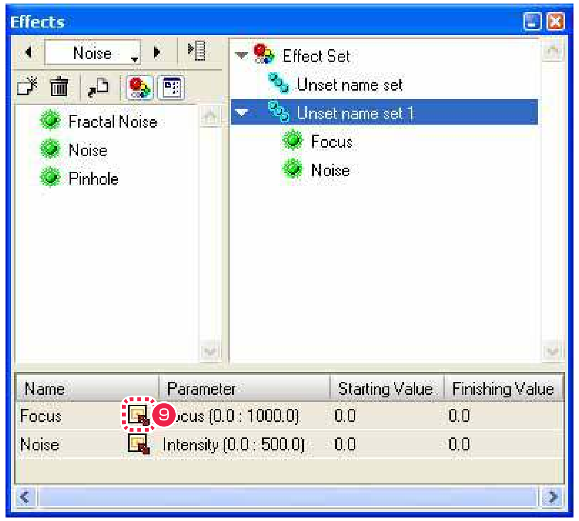
⑦ Path display area
Lists the created paths. The path with a check mark is displayed in the [Stage] window (when the [Motion Path] button is ON).

Effects palette

The [Effects] palette manages various filters and [Effect Set]. You can create an [Effect Set] that combines multiple filters or load a filter to an X-sheet.

The [Effects] palette opens when you select [Effects] from the [Window] menu.


Effects
Ver.5 Comp.
Alpha Blur V5
Corner Pin V5
Focus V5
Gaussian Blur V5
Invert V5
Light Blur V5
Mosaic V5
Noise V5
Shadow V5
①
②
③
④
⑤
⑥
⑦
⑧


Effects
Noise
Fractal Noise
Noise
Pinhole
Effect Set
Unset name set
Unset name set 1
Focus
Noise
⑨

Name	Parameter	Starting Value	Finishing Value
Focus	ocus (0.0 : 1000.0)	0.0	0.0
Noise	Intensity (0.0 : 500.0)	0.0	0.0

Effect set view and list view

① [Select Effect Category]
You can switch select effect categories. Click the category display area to select from menu.

② [Show Menu] button
Displays the menu for effect sets.

③ [New Effect Set] button
This creates a new effect set.

④ [Delete Selected Item] button
Deletes the effect filter and effect set that are loaded to the effect set view.

⑤ [Load Effect to Sheet] button
Select an effect filter and click this button to load it to the layer selected in the X-sheet.

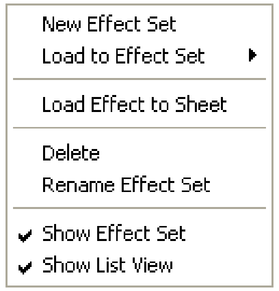
⑥ [Show/Hide Effect Set] button
Shows or hides the effect set view.

⑦ [Show/Hide List View] button
Shows or hides the list view.

⑧ Effect Filter display
Lists effect filters for each category.
Select a filter and drag and drop to a layer in the X-sheet to load it.

⑨ [Effect Setting] button
Shows the setting dialog box for each effect.

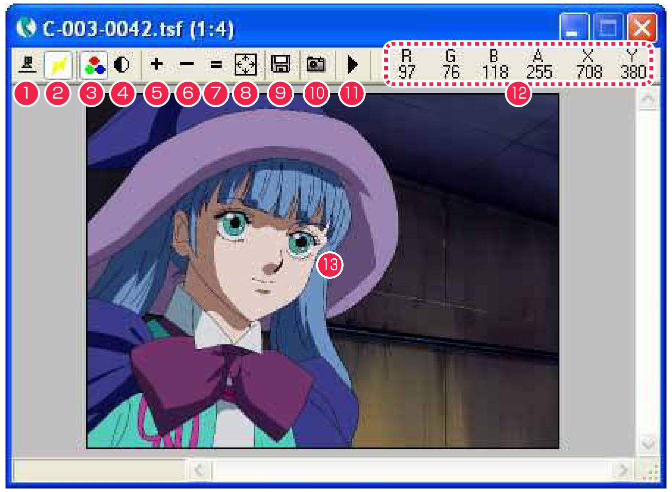
Effect set menu


New Effect Set
Load to Effect Set ▸
Load Effect to Sheet
Delete
Rename Effect Set
✓ Show Effect Set
✓ Show List View

Select [Show Menu] in the [Effect Set] dialog box to display the menu.

- [New Effect Set]
  This creates a new effect set.
- [Load to Effect Set]
  Select an effect filter and click this button to load it to the effect set.
- [Load Effect to Sheet]
  Select an effect filter and click this button to load it to the layer selected in the X-sheet.
- [Delete]
  Deletes the effect filter and effect set that are loaded to the effect set view.
- [Rename Effect Set]
  Renames the name of the effect set that is loaded to the effect set view.
- [Show Effect Set]
  Shows or hides the effect set view.
- [Show List View]
  Shows or hides the list view.

Rendering window



① [Rendering] button
Draws the current frame.

② [Quick Rendering] button
When this is selected, preview is always executed in real time without executing [Rendering of Current Frame].

③ [RGB View] button
This is used to return to the normal image display during [Alpha View].

④ [Alpha View] button
Shows the alpha channel of the displayed image.

⑤ [Zoom In] button
Zooms in the displayed image.

⑥ [Zoom Out] button
Zooms out the displayed image.

⑦ [Normal] button
Shows the displayed image in actual pixels.

⑧ [Fit on Screen] button
Shows the displayed image so that the entire image is contained in the [Image View] area.

⑨ [Save Image] button
Saves the image that is currently displayed in the [Rendering] window into the hard disk. Clicking this button shows a dialog box where you can specify the file format and save destination.

⑩ [Copy to Clipboard] button
Copies the image that is currently displayed in the [Rendering] window into the clipboard.
This is used when you want to copy & paste an image to another application.

⑪ [Apply RAM Preview] button
Executes [RAM Preview] to play the image according to the actual timing.

⑫ [Information] area
Shows information on the pixel indicated by the cursor.

- R, G, B:
  RGB values of the pixel at the position indicated by the cursor.

- A:
  Alpha channel value of the pixel at the position indicated by the cursor.

- X, Y:
  X and Y coordinates of the pixel at the position indicated by the cursor.

⑬ [Image] area
An area that shows the rendered image.

POINT

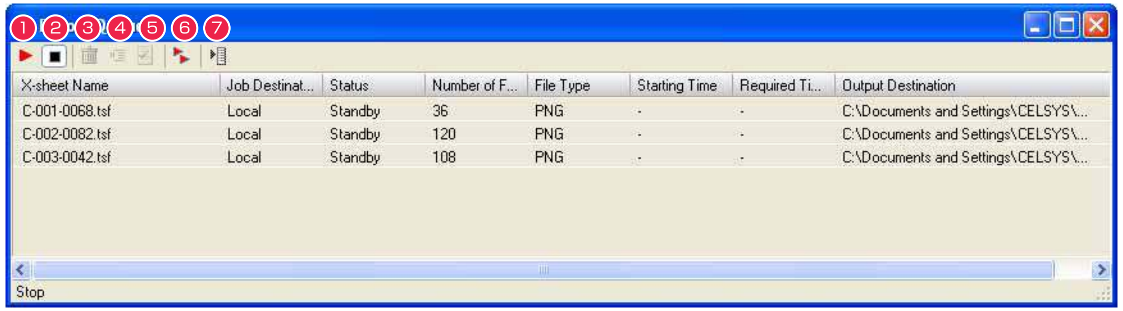
Zoom in around the position where you click
Click in the [Image] area to enlarge the image centering around the position you clicked.

Zoom out around the point where you click
Click in the [Image] area while you press [Alt]/[Opt] key to reduce the image centering around the position you clicked.

Scroll the image
When the [Image] area is larger than the window, drag in the [Image] area while you press the [Ctrl/Cmd] key to scroll the image.

Export queue window

When you execute the [Export] or [Batch Export] command in CoreRETAS HD, the X-sheet to be exported is added to a list called [Queue].
X-sheets entered into the queue are exported one by one in the order of the queue.
You can stop or delete queue items even while they are in rendering.



X-sheet Name	Job Destinat...	Status	Number of F...	File Type	Starting Time	Required Ti...	Output Destination
C-001-0068.tsf	Local	Standby	36	PNG	-	-	C:\Documents and Settings\CELSYS\...
C-002-0082.tsf	Local	Standby	120	PNG	-	-	C:\Documents and Settings\CELSYS\...
C-003-0042.tsf	Local	Standby	108	PNG	-	-	C:\Documents and Settings\CELSYS\...

Stop

① [Start] button
Starts export (export queue process). Normally, items are exported one by one from the top of the queue.

② [Stop] button
Stops export (export queue process).

③ [Delete Item] button
Deletes the selected item in the [Export Queue].

④ [Set Item to Standby Condition] button
Sets the selected item in the [Export Queue] to standby condition. This is not available while export is executed.

⑤ [Change Export Settings...] button
Shows the [Export] dialog to allow you to change export settings. This is not available while export is executed.

⑥ [Batch Export...]
Shows the [Batch Export] dialog to allow you to select X-sheets to be exported in batch.

⑦ [Show Menu]
Shows the [Export Queue] menu.

- [X-sheet Name]
  Shows the names of the X-sheets to be exported.

- [Job Destination]
  Shows the types of computers that execute export (rendering).

- [Status]
  Shows the current status of each item in the queue.

- [Number of Frames]
  Shows the total number of frames in the X-sheet to be exported.

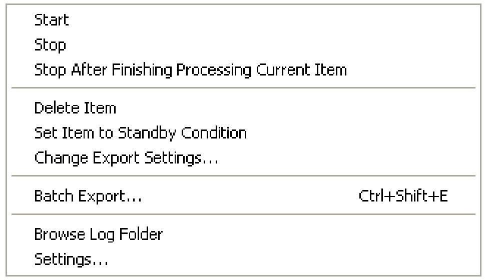
- [File Type]
  Shows the file format of the exported image specified in [Export].

- [Starting Time]
  Shows the time export is started.

- [Required Time]
  Shows the time required for export.

- [Output Destination]
  Shows the destination that is specified in [Save In] in the [Export] dialog.

[Export Queue] menu


Start
Stop
Stop After Finishing Processing Current Item
Delete Item
Set Item to Standby Condition
Change Export Settings...
Batch Export... Ctrl+Shift+E
Browse Log Folder
Settings...

This is shown when you select [Show Menu] in the [Export Queue] window.

- [Start]
  Starts export (export queue process). Normally, items are exported one by one from the top of the queue.

- [Stop]
  Stops export (export queue process).

- [Stop After Finishing Processing Current Item]
  Stops processing of the [Export Queue] after finishing export that is in execution.

- [Delete Item]
  Deletes the selected item in the [Export Queue].

- [Set Item to Standby Condition]
  Sets the selected item in the [Export Queue] to standby condition. This is not available while export is executed.

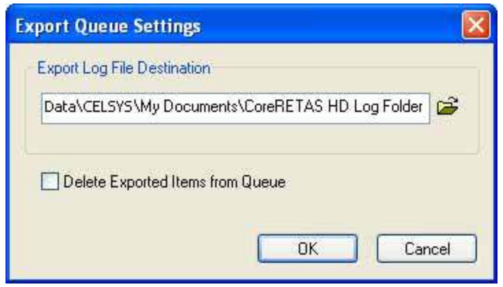
- [Change Export Settings...]
  Shows the [Export] dialog to allow you change export settings. This is not available while export is executed.

- [Batch Export...]
  Shows the [Batch Export] dialog to allow you to select X-sheets to be exported in batch.

- [Browse Log Folder]
  Shows the folder in which export log folder is saved (log folder) on the screen.

- [Settings...]
  Shows the [Export Queue Settings] dialog box.

- [Export Queue Settings] dialog box



Export Log File Destination
Data\CELSYS\My Documents\CoreRETAS HD Log Folder

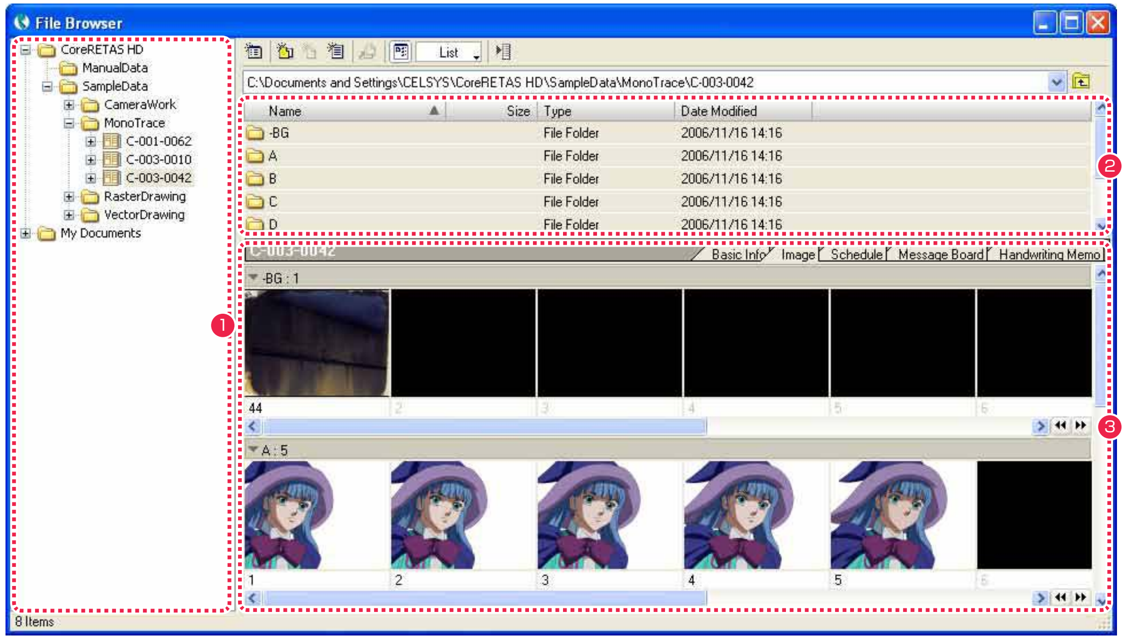
☐ Delete Exported Items from Queue

- [Export Log File Destination]
  Specify the location to create the export log file.

- [Delete Exported Items from Queue]
  Items that are exported are deleted from the queue.

File browser

The file browser opens when you select [File Browser] from the [Window] menu.


File Browser
CoreRETAS HD
ManualData
SampleData
CameraWork
MonoTrace
C-001-0062
C-003-0010
C-003-0042
RasterDrawing
VectorDrawing
My Documents
List
C:\Documents and Settings\CELSYS\CoreRETAS HD\SampleData\MonoTrace\C-003-0042
C-003-0042
Basic Info
Image
Schedule
Message Board
Handwriting Memo
-BG : 1
A : 5
8 Items
①
②
③

Name	Size	Type	Date Modified
-BG		File Folder	2006/11/16 14:16
A		File Folder	2006/11/16 14:16
B		File Folder	2006/11/16 14:16
C		File Folder	2006/11/16 14:16
D		File Folder	2006/11/16 14:16

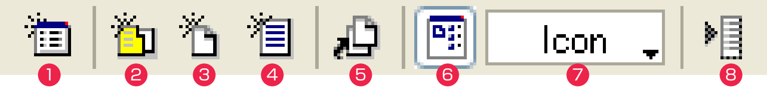
① **Tree View**
Shows the directory structure and the location of the scene folder in tree format.

② **File View**
Shows the files under the folder selected in the tree view.

③ **Info View**
Area where the information in the [Basic Info], [Image], [Schedule], [Message Board], and [Handwriting Memo] tabs of the scene folder selected in the tree view is shown. Select the corresponding tab to switch the information shown.

In the [Image] tab, images in the [Layout], [Keys], [Inbetweens], and [BG] folders are listed.

Name of the file browser buttons


Icon
①
②
③
④
⑤
⑥
⑦
⑧

① **[Edit Browser Folder...] button**
This button allows you to edit the scene folder location to browse from the [File Browser].

② **[New Scene Folder...] button**
This button allows you to create a new scene folder.

③ **[New Cel...] button**
This button allows you to create a new drawing paper when a blank [Cel Bank] column is selected.

④ **[New X-sheet...] button**
This button allows you to create a new X-sheet for the selected scene folder.

⑤ **[Load...] button**
Allows you to load an image file to a blank [Cel Bank] column.

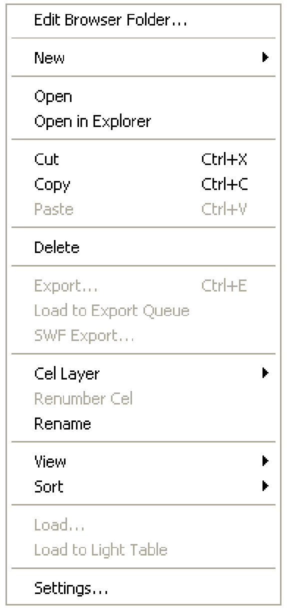
⑥ **[Show/Hide Tree View] button**
This button allows you to toggle between show and hide tree view at every click.

⑦ **[File View Switch]**
This switch allows you to select the way to show the File View from among [Icon], [Details], and [List].

⑧ **[Show Menu] button**
This button allows you to open the file browser menu.

File browser menu

The following menu is shown when you click the [Show Menu] button.



- [Edit Browser Folder...]
  Clicking this item opens the [Edit Browser Folder] dialog box which allows you to load the scene folder location to browse from the [File Browser].

- [New]
  Clicking this item shows the respective dialog box for creating a new [Cel], [Scene Folder], [X-sheet], or [Folder].

- [Open]
  Opens the selected folder or file.

- [Open in Explorer/Finder]
  Opens the selected folder or file in the Explorer (Windows version) or Finder (Macintosh version).

- [Cut]
  Cuts an image selected in the [File View] [Cel Bank].

- [Copy]
  Copies an image selected in the [File View] [Cel Bank].

- [Paste]
  Pastes an image selected in the [File View] [Cel Bank].

- [Delete]
  Deletes a folder of file selected in the [File View].

- [Export...]
  Exports data of the selected X-sheet.

- [Load to Export Queue]
  Loads the selected X-sheet to the [Export Queue] window.

- [SWF Export...]
  Exports the selected X-sheet to vector format SWF (Flash).

- [Cel Layer]
  Allows you to [Add], [Delete], [Rename], or [Move] cel folders.

- [Renumber Cel]
  Allows you to change the number of a cel selected in the Cel Bank.

- [Rename]
  Allows you to change the name of a folder selected in the Cel Bank.

- [View]
  This switch allows you to select whether to show or hide the [Tree View] and to select the way the File View is shown from [Icon], [Detailed], [List], and [Tree].

- [Sort]
  Allows you to sort the folders in the [File View] according to [Name], [Size], [Type], or [Date Modified].

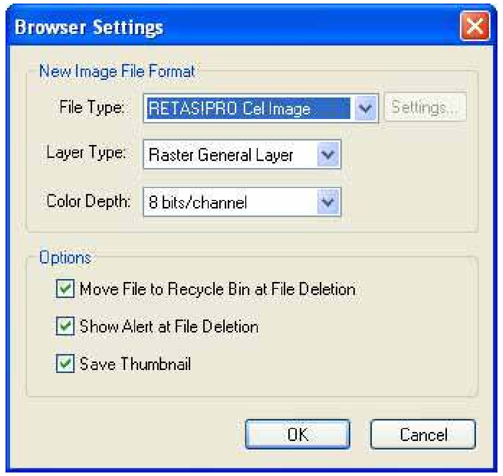
- [Load...]
  Allows you to load an image file to a blank [Cel Bank] column.

- [Load to Light Table]
  Allows you to load a layout, key, inbetween, and/or BG to the light table of the top [Cel] window from the [Cel Bank].

- [Settings...]
  Selecting this item opens the [Browser Settings] dialog box which allows you to specify the image format or layer type at the creation of a new image file or the handling at file deletion.

Browser settings dialog box

To open the [Browser Settings] dialog box, select [Settings...] from [Show Menu] in the [File Browser].



File Type: RETASIPRO Cel Image
Layer Type: Raster General Layer
Color Depth: 8 bits/channel

☑ Move File to Recycle Bin at File Deletion
☑ Show Alert at File Deletion
☑ Save Thumbnail

[New Image File Format]
Allows you to select the image file format.

- [Settings...]
  Depending on the image file format selected in [File Type], you may configure optional settings such as the compression method.

- [Layer Type]
  Allows you to select the layer.

- [Color Depth]
  Depending on the image file format selected in [File Type], you may configure the color depth settings.

[Options]
The following items are items enabled by selecting the corresponding check box.

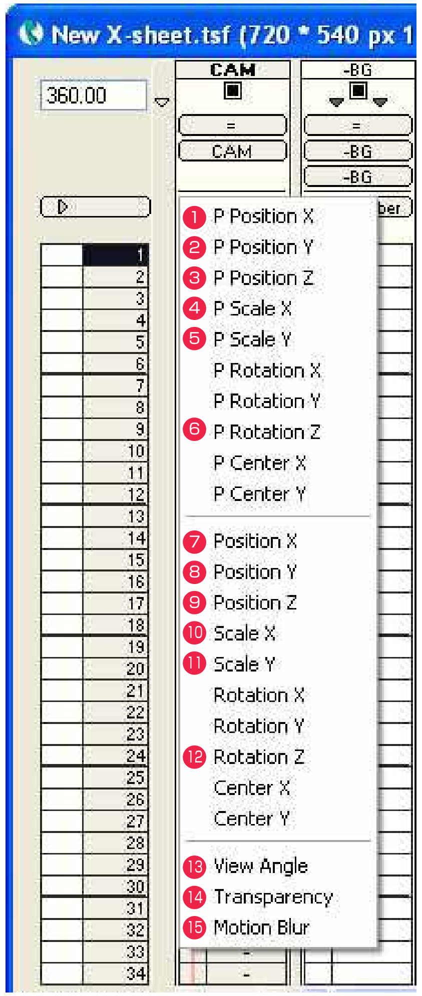
- [Move File to Recycle Bin at File Deletion]
- [Show Alert at File Deletion]
- [Save Thumbnail]

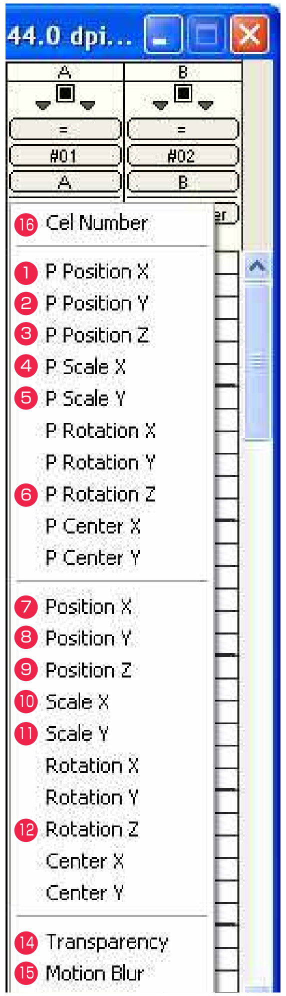
Step: 03

Shortcuts

In this step, an explanation is given about CoreRETAS HD shortcuts.

X-sheet window


New X-sheet.tsf (720 * 540 px 1
360.00
CAM
-BG
① P Position X
② P Position Y
③ P Position Z
④ P Scale X
⑤ P Scale Y
P Rotation X
P Rotation Y
⑥ P Rotation Z
P Center X
P Center Y
⑦ Position X
⑧ Position Y
⑨ Position Z
⑩ Scale X
⑪ Scale Y
Rotation X
Rotation Y
⑫ Rotation Z
Center X
Center Y
⑬ View Angle
⑭ Transparency
⑮ Motion Blur


44.0 dpi...
A
B
#01
#02
⑯ Cel Number
① P Position X
② P Position Y
③ P Position Z
④ P Scale X
⑤ P Scale Y
P Rotation X
P Rotation Y
⑥ P Rotation Z
P Center X
P Center Y
⑦ Position X
⑧ Position Y
⑨ Position Z
⑩ Scale X
⑪ Scale Y
Rotation X
Rotation Y
⑫ Rotation Z
Center X
Center Y
⑭ Transparency
⑮ Motion Blur

X-sheet [3D Mode]

[CAM layer selected]

① P Position X	X
② P Position Y	Y
③ P Position Z	Z
④ P Scale X	H
⑤ P Scale Y	V
⑥ P Rotation Z	R
⑦ Position X	Shift + X
⑧ Position Y	Shift + Y
⑨ Position Z	Shift + Z
⑩ Scale X	Shift + H
⑪ Scale Y	Shift + V
⑫ Rotation Z	Shift + R
⑬ View Angle(3D mode/during perspective projection)	A
⑭ Transparency	T
⑮ Motion Blur	M

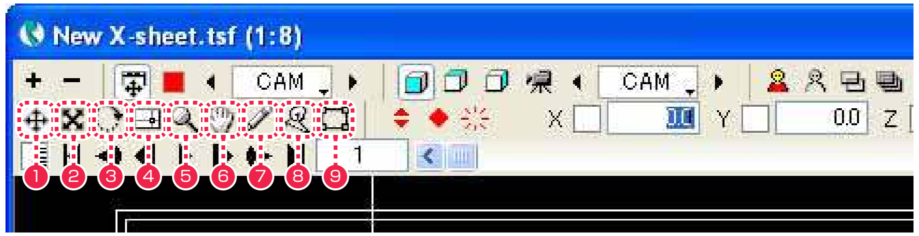
[Cel layer selected]

⑯ Cel Number	C

For Mac OS, replace as follows:

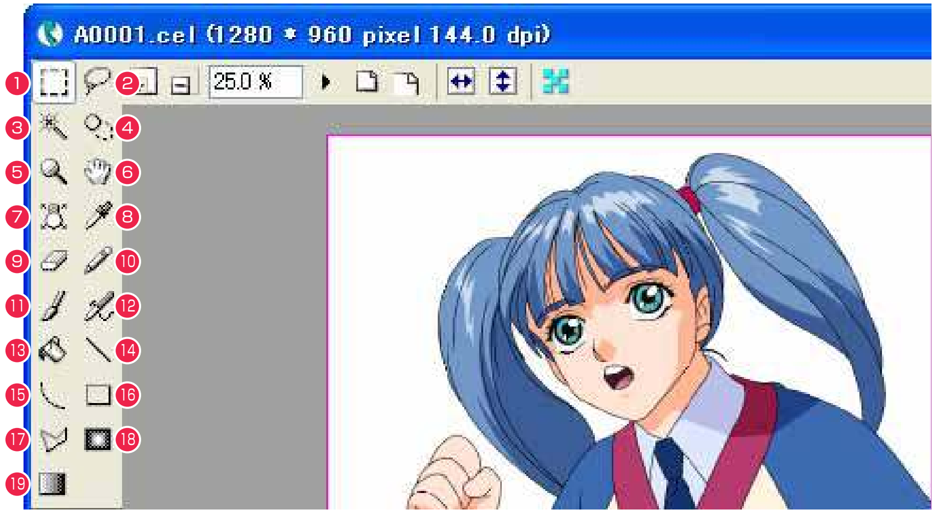
Ctrl -> Mac OS X Cmd (Command)
Alt -> Mac OS X Opt (Option)

Stage window


New X-sheet.tsf (1:8)
CAM
CAM
X
0.0
Y
0.0
Z
1
①
②
③
④
⑤
⑥
⑦
⑧
⑨

① Move tool	T	④ Center tool	C	⑦ Create Path tool	P
② Scale tool	S	⑤ Zoom tool	Z	⑧ Path Reshaping tool	J
③ Rotation tool	R	⑥ Hand tool	H	⑨ Corner Pin tool	B

Cel window


A0001.cel (1280 * 960 pixel 144.0 dpi)
25.0 %
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
⑱
⑲

① Rectangle Selection tool	M	⑧ Eyedropper tool	S	⑮ Curve tool	C
② Lasso tool	R	⑨ Eraser tool	E	⑯ Shape tool	N
③ Magic Wand tool	W	⑩ Pencil tool	P	⑰ Polyline tool	N
④ Selection Brush tool	Y	⑪ Brush tool	B	⑱ Airbrush Effect tool	V
⑤ Zoom tool	Z	⑫ Airbrush tool	A	⑲ Gradient tool	G
⑥ Hand tool	H	⑬ Fill tool	F		
⑦ Light Table tool	I	⑭ Line tool	L		

Command shortcuts

File

New -> X-sheet...	Ctrl + N
New -> Scene Folder...	Ctrl + Shift + N
Open -> X-sheet...	Ctrl + O
Open -> Scene Folder...	Ctrl + Shift + O
Close	Ctrl + W
Save	Ctrl + S
Save As...	Ctrl + Shift + S
Export...	Ctrl + E
Batch Export...	Ctrl + Shift + E
RAM Preview -> Apply	Alt + R
RAM Preview -> Settings...	Alt + Shift + R
Quit	Ctrl + Q

Edit

Undo/Redo	Ctrl + Alt + Z
Return 1 Step	Ctrl + Z
Proceed 1 Step	Ctrl + Shift + Z
Cut	Ctrl + X
Copy	Ctrl + C
Paste	Ctrl + V
Selective Paste...	Ctrl + Shift + V
Select All	Ctrl + A
Select Copied Range	Ctrl + Shift + A
Settings -> Preferences...	Ctrl + K

X-sheet

Parameter Settings...	Ctrl + T
Cel Number Auto Input...	Ctrl + J
Cel Auto Arrange	Ctrl + L
Layer -> Insert...	Ctrl + I
Layer -> Delete	Ctrl + D
Sound -> Play	Ctrl + G
Key Frames -> Continuous Key Frame Settings	Ctrl + 8
Key Frames -> Non-continuous Key Frame Settings	Ctrl + 9
Key Frames -> Unset	Ctrl + 0
Apply Inbetweening	Ctrl + B
Align Center	Ctrl + M
To First Frame	Alt + <
To Last Frame	Alt + >
Call Up Frame...	Ctrl + F
Call Up Current Frame	Ctrl + Shift + F
Sheet Settings -> General...	Ctrl + Shift + U
Sheet Settings -> Info...	Ctrl + U

Stage

Standard View	Ctrl + 1
Image	Ctrl + 2
Show Pegbar	Ctrl + 3
Show Manipulator	Ctrl + 4
Play	Alt + Shift + >

Effects

Add Effect	Ctrl + Shift + I
Delete	Ctrl + Shift + D

Rendering

Rendering of Current Frame	Ctrl + R
Rendering Settings...	Ctrl + Shift + R

Window

Scale -> Zoom In	Ctrl + Num+
Scale -> Zoom Out	Ctrl + Num -
Scale -> Fit on Screen	Ctrl + Num *
Scale -> Actual Pixels	Ctrl + Num /
Stage(Window)	F4
Rendering(Window)	F5
Export Queue(Window)	F6
Cel Bank(Palette)	F7
Layer Settings(Palette)	F8
Inbetweening(Palette)	F9
Motion Path(Palette)	F10
Effects(Palette)	F11
File Browser	F12

Others

Insert marker	Alt + 1 ... 0
Call up section between markers	Shift + 1 ... 0
Create selection between two markers	While pressing (Shift + 1st marker key), press 2nd marker key.
Clear marker	Alt + Shift + 1 ... 0
Show image on clipboard in rendering window	F1
Show X-sheet front	Space

For Mac OS, replace as follows:

Ctrl -> Mac OS X Cmd (Command)
Alt -> Mac OS X Opt (Option)

Modifier keys

Condition	Modifier Key	Operation	Function
X-sheet window			
	Shift	Select cel bank	Load image to cel bank
	Ctrl	Drag	Switch to hand tool
	Alt	Move effect layer	Copy effect layer
Stage Window			
Common to all tools	Ctrl	Drag	Switch to hand tool
When using move tool	Shift	Drag	Fix movement direction as horizontal or vertical
When using move tool (Auto refresh: ON)	Alt	Drag	Auto non-continuous key frame setting
When using scale tool	Shift	Drag	Change scale only in X or Y direction
When using center tool	Shift	Drag	Fix movement direction as horizontal or vertical against pegbar position.
When using zoom tool	Alt	Click	Zoom out
Create path – When using line tool	Shift	Draw line	Snap line angle in 45 degrees.
Create Path - When using curve tool	Shift	Draw line	Snap curve angle in 45 degrees.
Create Path - When using polyline tool	Shift	Draw line	Snap polyline angle in 45 degrees.
Create Path - When using Continuous Curve tool	Shift	Draw line	Snap continuous curve angle in 45 degrees.
Create Path - When using rectangle tool	Shift	Draw line	drawing rectangle; Snap in 45 degrees when setting angle.
Create Path - When using ellipse tool	Shift	Draw line	Fix as circle when drawing ellipse; Snap in 45 degrees when setting angle.
Create Path - When using polygon tool	Shift	Draw line	Fix as regular polygon when drawing polygon; Snap in 45 degrees when setting angle.
When number input area is focused	Shift	Key frame button	Set key frame only for focused parameter.
Scale tool - When inputting numbers	Shift	Enter	Apply value only to input parameter.
Rendering Window			
		Click	Zoom in (Switch to zoom tool).
	Alt	Click	Zoom out (Switch to zoom tool).
	Ctrl	Drag	Switch to hand tool.
When using quick rendering	CapsLock		Stop quick rendering when CapsLock is set.
When using RAM Preview	Space		Stop rendering to play
Inbetweening palette			
	Shift	Item unfolding button	Display only this item and close the others.
	Shift	Key frame button	Set key frame only to selected item on X-sheet.
Cel Window			
	Ctrl	Drag	Switch to hand tool.
	Alt	Click	Switch to eyedropper tool.

Step:
04

Technical information

In this step, an explanation is given about technical information on CoreRETAS HD.

Notes on cut & paste

1. When you perform "cut" or "copy", all parameters are transferred to the buffer regardless of what is selected in the "Select Input Parameter" menu.

"All parameters" mean the following parameters that can be selected in the "Select Input Parameter" menu.

Parameters that are copied to the buffer by "cut" or "copy":

Cel Number (Note 1)

P Position X
P Position Y
P Position Z
P Scale X
P Scale Y
P Rotation X (Note 2)
P Rotation Y (Note 2)
P Rotation (P Rotation Z)
P Center X
P Center Y

Position X
Position Y
Position Z
Scale X
Scale Y
Rotation X (Note 2)
Rotation Y (Note 2)
Rotation (Rotation Z)
Center X
Center Y

View angle (Note 3)
Transparency
Motion Blur

Note 1: The [Camera Layer] does not have a [Cel Number].
Note 2: Available only in the [3D mode].
Note 3: Available only on the [Camera Layer] in the [3D mode].

You cannot "cut" or "copy" selective parameters only.

2.When you perform paste data, all the copied parameters overwrites the current data.

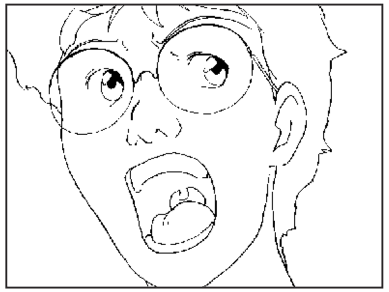
When you want to paste selective parameters, use the "Selective Paste" command.

PaintMan layer structure

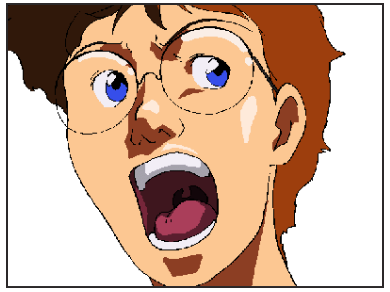
The inbetweens you paint with PaintMan HD are composed of multiple layers and planes. The layers can be classified in three types, each having a slightly different structure: [Mono Paint Layer], [Gray Paint Layer], and [Vector Paint Layer].

Mono paint layer

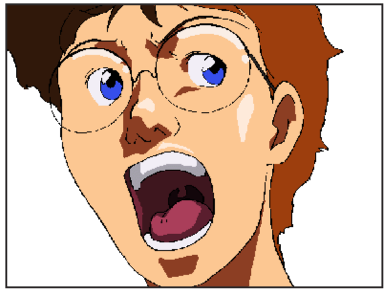
This layer is basically composed of 2 types of planes: the [Outline Plane] and the [Painting Plane].



Outline plane



Painting plane

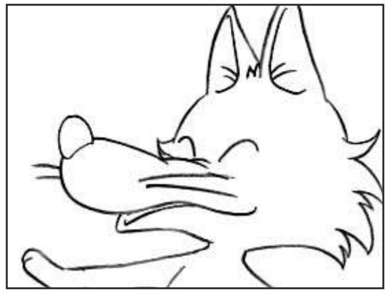


Complete drawing

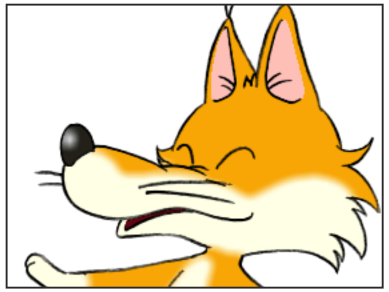
- [Outline Plane]
  Stores the outlines of the inbetween.
- [Painting Plane]
  Stores the color separation lines and the painted colors.
- [Raster Plane]
  Additional plane created for applying airbrush separately, for example.

Gray paint layer

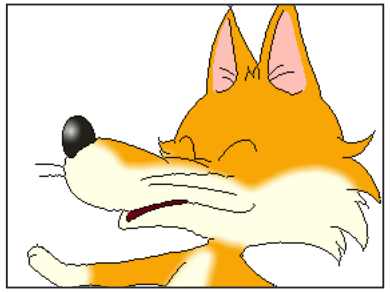
This layer is basically composed of 2 types of planes: the [Outline Plane] and the [Painting Plane].



[Outline Plane] (grayscale)



Complete drawing



[Painting Plane] (with border line)

- [Outline Plane]
  Stores the outlines of the inbetween in grayscale.
- [Painting Plane]
  Stores the color separation lines, the painted colors, and also the [border lines] for painting.
- [Raster Plane]
  Additional plane created for applying airbrush separately, for example.

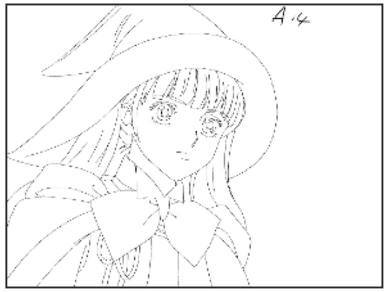
POINT

Paint over flow in the gray paint layer

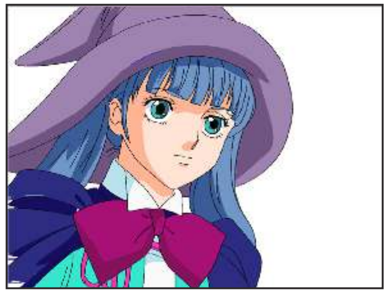
With [Gray Paint Layer], as the gray lines on the [Outline Plane] are lines in halftone, the border lines become hidden in the [Painting Plane] with pixels whose "RGB = 0,0,0". Due to this reason, with [Gray Paint Layer], paint overflow occurs not when outlines but [Border Lines] in the [Painting Plane] have gaps.

Vector paint layer

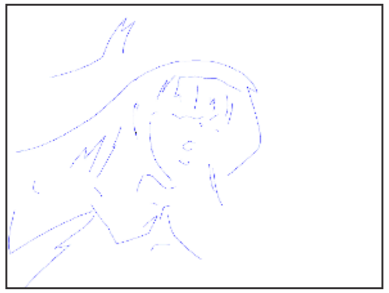
This layer is composed of the [Outline Plane], the [Color Separation Line Plane] where the color separation lines are drawn (there may be more than one), and the [Coloring Plane] for painting.



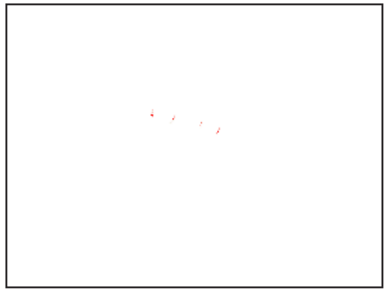
Outline plane



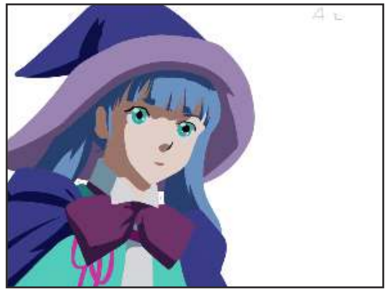
Complete drawing



Color separation line plane 1



Color separation line plane 2



Coloring plane

- [Outline Plane]
  Stores the outlines of the inbetween as vector lines.
- [Color Separation Line Plane]
  Stores the color separation lines drawn with vector lines by color.
- [Coloring Plane]
  Stores the painted colors in vector format. This plane is where you do the painting.
- [Raster Plane]
  Additional plane created for applying airbrush separately, for example.

About color styling

Color styling using computer

Colors on computers are expressed using either RGB or HSV. RETAS!PRO HD can handle both. However, only RGB will be described here as it is more common.
In computers, "colors" are expressed as a mix of the three primary colors in light: Red (R), Green (G), and Blue (B).
Each of the R, G, and B colors can be expressed in 256 levels (0 to 255) when, for example, using 8 bit per channel 24 bit full color.
In other words, a gray with brightness of 50% can be expressed as (RBG: 128, 128, 128).

Example:

Skin	R : 252	G : 199	B : 146
Skin (shadow)	R : 140	G : 162	B : 35
Skin (highlight)	R : 255	G : 232	B : 217
Hair	R : 252	G : 199	B : 146
Hair (shadow)	R : 157	G : 162	B : 13

Differences in coloring due to differences in the display device

Normally, color styling is done using the computer screen. However, most animations are reproduced through a video monitor or film.
Therefore, in color styling, it is important to check the colors using the final display device as color generation mechanisms are different among the different devices.

Exchanging data with other OS`s

If you want to exchange data with other OS`s, follow the recommendations below to name the files and avoid possible problems.

Do not use the following characters in a filename

「/」「:」「?」「*」「"」「<」「>」「¦」「¥」

Do not use model-specific characters

Example of model-specific characters : 「①」「②」

Do not enter a filename with 32 or more single-byte characters

Always specify the extension

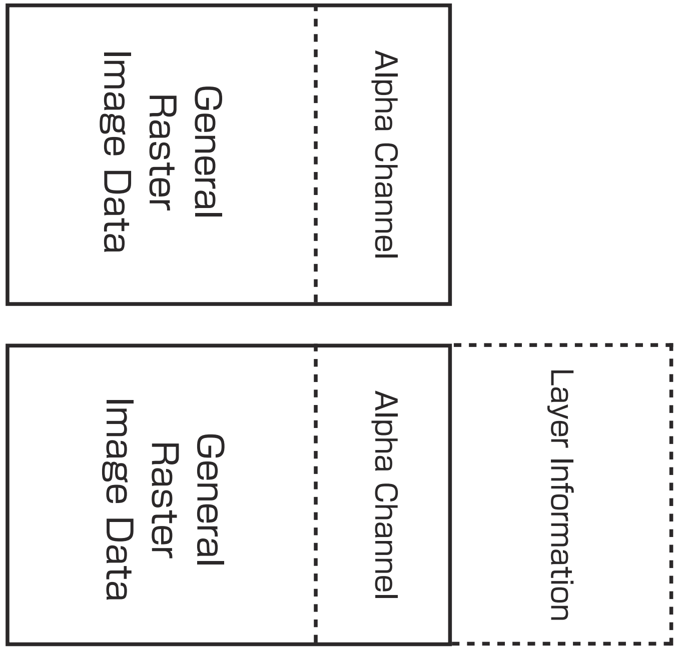
In summary, put short and simple names using only "single byte characters" and "single byte numbers".

Exchanging data with other software programs

Some application programs may not be able to open an general raster image processed with RETAS!PRO as they interpret the layer information recorded by RETAS!PRO at the end of an general raster image file as "invalid".

Save format

PaintMan HD retains information of several layers separately for the purpose of inbetween (line drawing) painting. When TraceMan HD executes a mono trace and saves in the general raster image format, it assigns the outline plane to black lines and the color plane to color separation lines (red, blue, and green), automatically.
And, information such as the outline plane information, is recorded at the end of the normally unused image file.

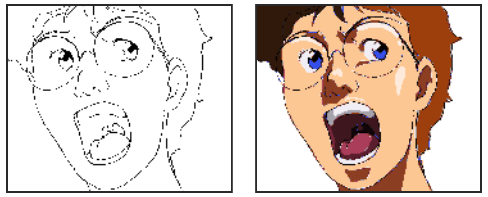


[Figure: Layer information recorded at the end of the image file]

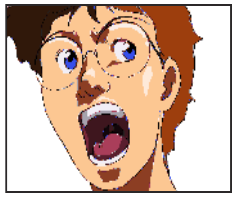
If you load and save an image file generated with TraceMan HD using an application program other than RETAS!PRO HD series (*), the information added by RETAS!PRO such as the outline plane information becomes lost.

When you open a mono traced image using another application:

Example:
[When opened using PaintMan HD]

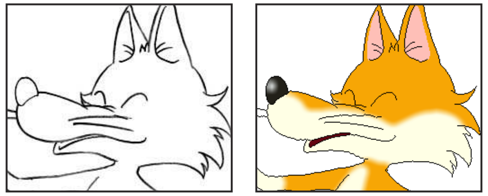


Example:
[When opened using photo retouching software etc.]

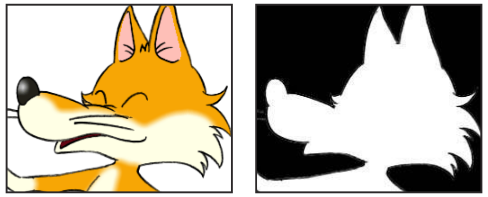


When you open a gray trace image using another application:

Example:
[When opened using PaintMan HD]



Example:
[When opened using photo retouching software]



You can separate the layers of a mono traced image using any of the following methods:

(1) Use the "Separation" function of the [Batch] palette of PaintMan HD to separate the color of the outlines.
(2) Trace again using TraceMan HD.

* CoreRETAS HD cannot edit an image while keeping the layer structure as TraceMan HD or PaintMan HD.

Compatibility of X-sheets

CoreRETAS HD can read X-sheets that are created using Ver. 5 without any conversion.

You can save X-sheets that are created using CoreRETAS HD in Ver. 5 format so that they can be read in previous version.

* If you save an X-sheet with functions available in HD only such as [3D Camera Work Function] etc., information on those will be lost when the X-sheet is saved.

		Loading application			
		Ver.4	Ver.5.0	Ver.5.7	Ver.6
Exporting application	Ver. 4.0 format	◎	△ (*1)	△ (*2)	×
	Ver. 5.0 format	×	◎	○	○
	Ver.5.7 format	×	△ (*3)	◎	○
	Ver. 6/2D format	×	× (*4 / *6)	× (*5 / *6)	◎
	Ver. 6/3D format	×	× (*4 / *6)	× (*5 / *6)	◎

*1 "Parental layers" information is ignored.
The result of "Gray Mask" and "Alpha Mask" are different.

*2 The result of "Gray Mask" and "Alpha Mask" are different.

*3 If suffix (Ex. :"5a" etc.) are used a "Cel Number", the cel number is not reproduced correctly.

*4 If suffix (Ex. :"5a" etc.) are used a "Cel Number", the cel number is not reproduced correctly.

*5 If suffix (Ex. :"5a" etc.) are used a "Cel Number", it can be loaded if it is in the same format as that of Ver. 5.7 (numeric value + two letters). Other formats cannot be reproduced correctly.

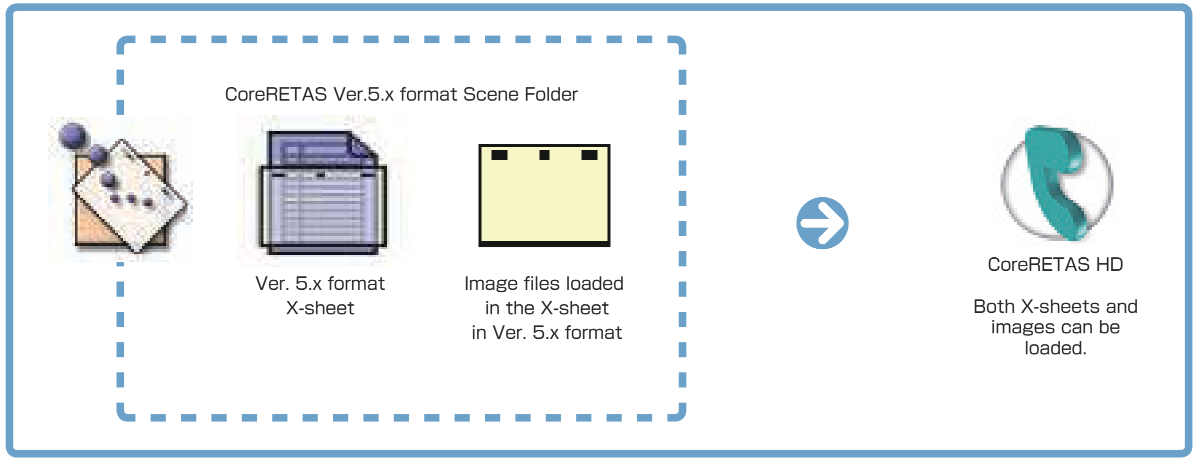
*6 X-sheets in Ver. 6 format cannot be directly loaded, but you can save them in Ver. 5 format to load them. In addition, follow the recommendations below:

- Cel numbers modified in [Cel Bank] or [File Browser] cannot be reproduced correctly.
- If [Color Plane] is used to the [Cel Bank], the plane will be deleted from the [Cel Bank].
- If the image resolution is changed using [Cel Bank]`s [Resolution Settings], the settings will be ignored.
- When [CEL Format] or [DGA format] is loaded to the [Cel Bank], these images will be deleted from the [Cel Bank].
- If the camera mode is set to the [3D Mode], it will be replaced by the [2D Mode].
- If more than one [Camera] layer is created, only the first [Camera] layer will be loaded.
- "Inbetweening settings between frames" will be deleted.
- Compositing modes that are not supported by Ver. 5.x will be replaced by [Normal].
- [Effects] layers that are not supported by Ver. 5.x will be deleted.
- [Effects] layers that use [Effect Set] will be deleted.
- If [Parental Pegbar] is linked, the information will be deleted.
- If [Corner Pin] function in the Layer Settings palette is used, the information will be deleted.

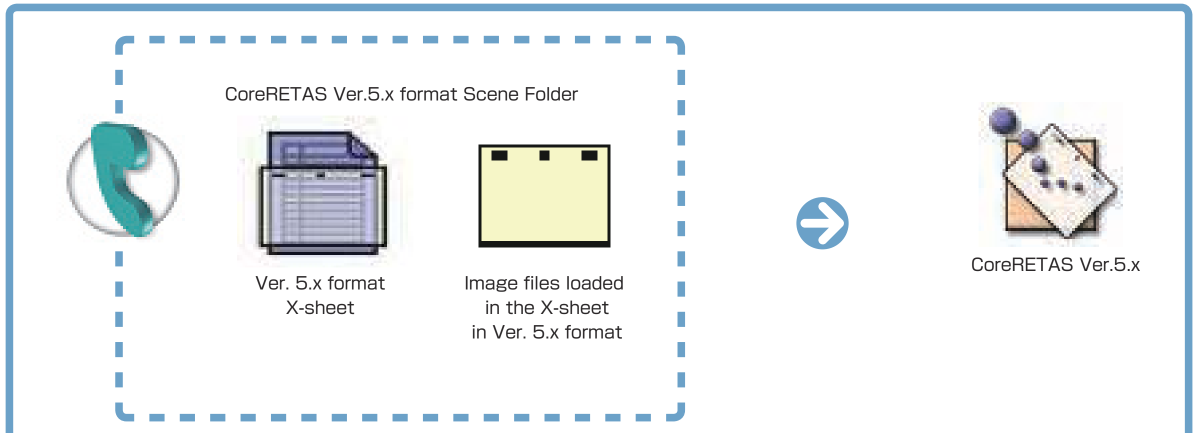
Compatibility of images

Image formats that can be loaded and exported in CoreRETAS Ver. 5.1 are also available in CoreRETAS HD similarly.

From CoreRETAS ver.5.x to HD


CoreRETAS Ver.5.x format Scene Folder
Ver. 5.x format X-sheet
Image files loaded in the X-sheet in Ver. 5.x format
CoreRETAS HD
Both X-sheets and images can be loaded.

From HD to CoreRETAS ver.5.x


CoreRETAS Ver.5.x format Scene Folder
Ver. 5.x format X-sheet
Image files loaded in the X-sheet in Ver. 5.x format
CoreRETAS Ver.5.x

*1 CEL format and DGA format cannot be loaded into Ver. 5.x.
*2 If [Color Plane] is loaded to the [Cel Bank], it cannot be loaded into Ver. 5.x.
*3 For more information on X-sheet compatibility, see the left.

Step: 05

Mouse and pen tablet operation

In this step, an explanation is given about mouse and pen tablet operations in CoreRETAS HD.

Name of mouse parts

Left button

Right button

Mice used with Mac OS X may have only one button. If so, use [Ctrl] + button to perform the right button operation.

Scroll wheel

Name of pen tablet parts

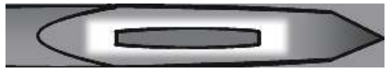
Graphics tablet

Stylus

Pen-like input device.

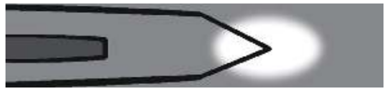
Active area is the workspace.

Side switch



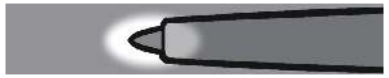
Button at the side of the stylus. The button closer to the tip is the [Side Switch], and the farther from the tip is the [Second Side Switch]. Depending on the stylus, it may have no side switches at all. The operation you can perform using the side switches can be configured using the pen tablet settings. Please note that the description in this user guide is basically limited to the default settings.

Tip switch



A switch at the tip of the pen. The switch is turned on when the tip touches the graphics tablet.

Tail switch



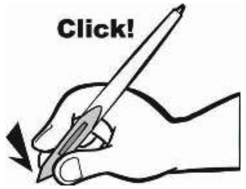
A switch at the opposite side of the tip switch. The switch is turned on when the tail touches the graphics tablet. Depending on the model, the stylus may have no tail switch.

Left click

With the mouse

Press the left button once.

With the pen tablet



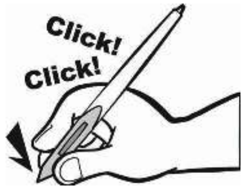
Touch the tablet "softly" with the tip of the stylus once. In this user guide, "click" refers to "left click" when stated simply.

Double click

With the mouse

Press the left button twice.

With the pen tablet


Click!
Click!

Touch the same point with the tip of the stylus twice. Or, press the second side switch on the stylus once.

Right click

With the mouse

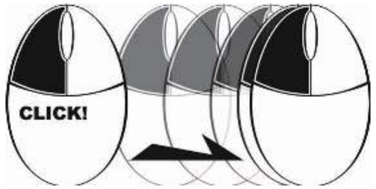
Press the right mouse button once.

With the pen tablet

Press the stylus side switch once.

Drag

With the mouse



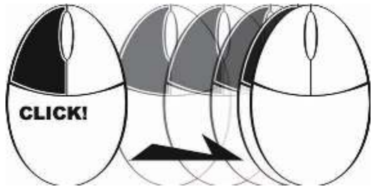
Move the mouse with the left button held down.

With the pen tablet

Move the stylus with the tip touching the graphics tablet.

Drag & drop

With the mouse



Move the mouse with the left button held down then release the left button at the target point.

With the pen tablet

Move the stylus with the tip touching the graphics tablet and move away the tip from the graphics tablet at the target point.

Step: 06 Glossary

In this step, an explanation is given about mouse and pen tablet operations in CoreRETAS HD.

Graphics related

Vector format
Generic term for referring to an image format in which shapes such as points, lines, and curves as well as other image characteristics are expressed mathematically. Common features of vector format images are as follows:

1) Small file size
2) Configurable output resolution
3) Not memory-intensive
for example:

EPS, the format used in Adobe Illustrator, or SWF, the format used in Adobe Flash are examples of image formats using vector graphics.

Center line
A line that passes through the center of a vector line.

End points
The points that mark the ends of a vector line.

Raster graphics
Generic term for referring to an image format in which an image is expressed as dots with color information arranged horizontally and whose number varies depending on the resolution.
Common features of raster format images are as follows:

1) Good for delicate images such as nature or aquarelle painting
2) Easy to add effects
3) Versatile
4) Relatively easy to process using software
for example:

Raster and vector can coexist in the RETAS!PRO HD DGA and CEL formats.

BMP, the format used in Windows, PICT, the format mainly used in Macintosh, and TIFF used in various platforms are examples of image formats using raster graphics.
In RETAS!PRO, the recommended image format for raster graphics is PNG.

Rasterize
The process for converting an image data in vector format into raster format (bitmap).

RGB
Refers to a system for representing colors as a combination of the three primary colors in light: Red (R), Green (G), and Blue (B). You can adjust the color, saturation, and brightness by adjusting the level of each of the primary colors.
If 8 bits are used to express the level of a primary color (256 levels) in a pixel, the total number of available colors is 16,777,216 colors (approximately 16.7 million).
Similarly, if 16 bits are used to express the level of a primary color (65536 levels), many more colors are available.

HSV
Color expression using Hue, Saturation, and Value.
HSV allows you to compose colors more intuitively than with RGB.

α (Alpha), α plane, α channel
α (Alpha) is a transparency information used for compositing images, and α plane is the part of the image file where that information is stored.

Resolution
Indicates the level of detail of a scanned raster image, a printing, or a monitor. DPI and pixel are examples of units used for expressing resolution.

Anti-Alias
A process that smoothes the jagged edge seen in computer-drawn curves and shapes.
In CoreRETAS HD, this is called [Smoothing].

Computer terms

Thumbnail
Small aligned images of some 10 x 10 pixels used for identifying image data.

Dialog box
An interface in which information that is configurable by the user is shown to prompt user input.

Tab (control)
A GUI for presenting information in groups used when the information and/or controls to be shown is large and cannot be arranged in one window or dialog box.
Tab is used when there are two or more information and/or controls groups and is selected using an index that is normally located in the upper part of the tab.

Popup menu
A menu that appears when the mouse is clicked in a window or dialog box, and is normally used to select a command, option, or item.

Context menu
A popup menu that appears when the mouse is [right clicked] or [Ctrl] + [clicked] (Macintosh) in a window or dialog box. The menu that appears shows commands or settings that are specific to the location in which the mouse was clicked.
Context menu is a menu that is not available for all windows and dialog boxes.

Explorer
File management software implemented in Windows as standard.

Finder
File management software implemented in Mac OS X as standard.

File path
Location on the disk where a file is stored, normally composed of a volume name, folder name, and filename. Symbols such as slash (/), backslash (\), and colon (:) are often used to separate the volume name, folder name, and filename.

Example: /stylos_data/

Extension
Normally, a 3-letter (single byte character) code attached at the end of a filename to indicate the file type.

Shortcut (Windows) / Alias (Mac OS X)
"Alias" of a file or folder. An alias is not a file in itself, like a copy. In other words, the original file is not deleted even if the alias is. Double clicking the alias opens the original file.

Sort
A reordering of the information in a list based on a given criterion.

Unit terms

Inch
A unit of length used mainly in the USA. 1 inch = about 2.54 cm (25.4 mm).

FPS
Abbreviation of Frame Per Second that represents the number of frames in one second. It is used as the unit for frame rates in animated graphics.
Films use 24 frames in one second, so their FPS is 24 while for video (NTSC), there 30.

DPI
Abbreviation of Dot Per Inch that represents the number of dots (pixels) in one inch. It is used as the unit for representing the resolution of scanned raster format images, printing, monitors, etc.

Animation

Scene
Unit of screen image. Normally, a 30 minute TV animation program is composed of 300 to 400 scenes.
In live action, a scene is a series of images shot from the time the movie camera starts shooting until it stops.

Scene folder
In the production of animations, materials necessary for each scene are managed using a paper container called scene folder. And this paper container is called "scene folder".
This conventional scene folder is not only used as container but as a record of information such as check status, person in charge, directions, etc. so that they can be conveyed to other processes together with the materials contained.

Sequence
A "sequence" is similar to a "paragraph" in a document. That is, it is a group of images classified by "scene" or "time".

X-sheet / Sheet
A form for registering the order in which cels are to be arranged in the cel stack as well as the timings.

Color Chart / Chart
A "combination of colors (= set)" to be used in painting.

Story Board
The "project design sheet" where the outline, characters, actions, dialogue, sound effect, and length etc. for each of the sequences/scenes are detailed in order, along the story line.

Layout
The design sheet for the "scene", and therefore drawn before starting with the scene drawing. It is used to check the scene, timing, lighting direction, character/BG arrangement,
etc.

Keys/Key Drawing
"Keys" is the line drawing of a key movement.

Inbetween
"Inbetween" is an image that results from "inbetweening" which is a process where intermediate positions are drawn so that the movement from one key to the other looks continuous.

Cel
Originally, it referred to an image of a line drawing traced and then painted on celluloid (acetate).
In digital painting, it refers to a painted "inbetween".

Cel number
A sequential number assigned to keys and inbetweens. In computer-assisted key and inbetween drawing, files are named using the cel number.

Color styling
"Color styling" is the process in which colors to be used for painting each of the scenes are determined.
Sometimes, "color styling" refers to a written instruction containing directions regarding the colors to be used in painting.

Retake (direction)
Originally, is a term for indicating to "take the film again" (re-take). In the production of animation, however its meaning is wider and means "redoing" (applicable to drawing, finishing, and shooting).

Scene table, Schedule
Forms for managing the progress of an animation production. These forms give you information about "finished processes", "person in charge", "finished date", and "number of cels produced" etc. for each scene.

Frames
(1) A reference that gives the angle of view.
Examples: "drawing frame", "safety frame", "shooting frame", "painting frame"

(2) A single image in a video.
Examples: 5 seconds 10 frames

100 Frame (Japan)
The size of frame with a scene without camera-work. So, it means a frame with a size of 100%. This term is mainly used for specifying the angle of view for a camera-work. This is mainly used in Japan.
Example: T.U. up to 50 Frame

12 Field (USA)
The size of frame with a scene without camera-work. Originally, it means a field whose horizontal size is 12 inches. This term is mainly used for specifying the angle of view for a camera-work. This is mainly used in the USA. Example: T.U. up to 6 field

TV Frame / Safety Frame
The picture tube of a TV does not show the whole image recorded in a video because the screen`s mask cuts part of the image.
Due to this, the part of the images that must be shown on the TV screen needs to be drawn at some distance from the borders. That is, the part of the images that must be shown on the TV screen must be drawn inside the TV frame (safety frame).

Shadow markup
A shadow is a region of darkness formed behind an object that blocks the light.
So, "shadow" must be painted in darker colors than "illuminated" parts. "Shadow markup" is a direction put on an inbetween to indicate shadow. Shadow markup is generally done by filling roughly the relevant parts in green.

Transparency markup
A direction for the person(s) in charge of painting to leave a part in the image transparent, that is, without painting.
This is called "Transparency markup". "Transparency markup" is generally done by marking the area with an "x" input manually.

Highlight markup
A direction for indicating that an area must be painted in a special color called "highlight color" because it is a bright area (= highlight). Highlight markup is generally done by filling roughly the relevant parts in yellow.

Color separation (line)
A border between colors; that is, a separation between an "illuminated area (normal color)" and the "shadow (darker color)" when painting the skin, for example. It is generally drawn with a color pencil (other than black).
Eventually, it is filled with either the normal or the darker color.

Effects
Abbreviation of "special effects".
Generally, it refers to operations done during finishing such as "airbrushing".
It may also refer to the special effects used in shooting.

Light table
Is a function for showing images semi-transparently in the [Cel] window.
In RETAS!PRO HD series, the light table is controlled using a [Light Table] palette (CoreRETAS HD does not have it) and used for inbetweening.

Direction
A term that refers to "direction".
In RETAS!PRO HD series, the drawing X-sheet has a column in its upper part for the director to enter directions using text.

Cel BG
A normal BG is drawn on paper and painted with watercolors. "Cel BG" refers to a BG that is drawn based on the inbetweens and have the same finish as the cel.
It is used as a BG inbetween.

Model sheet
A list of characters used as a guide for drawing.

FIX
A kind of camera work. This means a scene without camera-work.

PAN
A kind of camera work. A scene in which camera turns its direction without changing its position relative to the object of shooting In animation, a scene in which frame direction is used in place of this camera work.

Follow
A kind of camera work. A scene in which camera follows the shooting object.

T.U. (Track up)
A kind of camera work. In live action, a scene in which the camera moves closer to the shooting object. In animation, a scene in which frame direction is used in place of this camera work.

T.B. (Track back)
A kind of camera work. In live action, a scene in which the camera moves away from the shooting object. In animation, a scene in which frame direction is used in place of this camera work.

F.I. (Fade in)
A kind of camera work. A scene in which a bright image emerges gradually from a darker image.

F.O. (Fade out)
A kind of camera work. A scene in which a dark image emerges gradually from a brighter image.

O.L. (Over lap)
A kind of camera work. One screen is replaced gradually by another screen changing exposure.

Double exposure / Dissolve
To combine and shoot multiple cels using multiple exposure.
Each cel is expressed semi-transparent.

Multi-plane
A kind of shooting technique. Use multiple steps for the camera base to supply perspective. In digital, a similar effect can be obtained by changing the focus of each cel.

Cushion(fairing)
A kind of shooting technique. When the camera or shooting object moves, gradually accelerate or decelerate at the start and end of movement.

Back Lighting
A kind of shooting technique. This is used to express "light" such as a light source within the screen.

Slanting light
A kind of shooting technique. This expresses the light that is thrown from the corner of the screen in a slanted angle.

overlay(book)
A type of background. This has a part of [transparent] and placed on another cel or background.

Pegbar
A tool that is used for lock layout drawing paper, drawing paper, cel, etc.

Shooting
In animation, it means shooting time-lapse photography of materials such as cel and background (analog) or compositing (digital).

Check materials
Indicates the work of a stage director or his/her assistant to do a final check of materials that are to be shot.

Step: 07 User support

In this step, an explanation is given about user support.

RETAS! PRO website

RETAS!PRO website provides latest technical information, updater downloading, etc. of RETAS! PRO series. You can also register yourself on the website.

URL http://www.retas.com/

Step: 08 Before contacting this company

In this step, an explanation is given about questions about CoreRETAS HD.

When troubles occur, please contact us according to the following procedure.

1. Look over Q&A bellow first and confirm whether there are some applicables.

2. Are the software system requirements met?
RETAS!PRO only works when combination of hardware and OS is appropriate.
Please refer to this manual and confirm your system in detail.

3.Has RETAS!PRO series been installed correctly?
Install it correctly as described in this manual.

4.Has RETAS!PRO series been updated to the latest one?
Software is updated and its version number revised to correct troubles found after release or to add functions.

A trouble might be solved by updating if updater is already released because the trouble is an already known one.
Updater downloading is available at RETAS!PRO website. See the User Support page for RETAS!PRO website's address. When the trouble is not solved even if the above mentioned point are cleared, please inquire of your dealer.
It will be of great help if you check the following points before contacting us.

(1) The computer you are using

(2) The version of OS you are using
Let us know the version number of your OS in detail.

(3) The version of RETAS!PRO you are using
RETAS!PRO has a function to confirm the version number.
Check all of the digits in the version number.

Example: ○ CoreRETAS HD Ver.6.0.0
× CoreRETAS HD Ver.6

(4) Is there any Error Message?
Which message if so. If the content of the error message is accurately recorded, it becomes easier to identify the phenomenon that is occurring.

(5) The operation you did when the error occurred.
Let us know the "Command selected" and the "Button clicked" at the time the error occurred with as much detail as possible.

(6) How frequent does the error occur?
Does any specific operation cause the error each time?
How many times does the error occur out of ten operations?

Step: 09 F A Q

In this step, an explanation is given about CoreRETAS HD FAQs.

Start-up

Q. RETAS!PRO HD series doesn`t start.

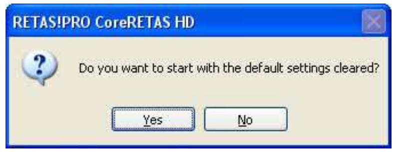
(1) Is your system meeting the requirements?
To run RETAS!PRO, the CPU, the version of OS, the capacity of memory and so on of your computer must meet the system requirements.
Check if your PC meets the system requirements.

(2) The software may be corrupted.
There is a possibility that application itself is corrupted. Please re-install the software.
With Windows version, you must uninstall before a re-install. Restart the OS after Uninstallation.

Q. RETAS!PRO HD series freezes. It does not recover even after re-installation.

(1) Have you installed any software which is not standard?
Some device drivers, among those not provided by the OS as standard, have bad compatibility with RETAS!PRO HD series.
Recover your OS to the condition of immediately after installation.

(2) The Preferences file may be corrupted.
The Preferences file might be corrupted, try to delete the Preferences file with the following procedure. The only effect when the preferences are cleared is that each software setting is reset to default. The application software is not affected.
To clear the preferences, double click the RETAS!PRO HD series icon to start the application and press the [Shift] key right after it starts.
A dialog box with the message "Do you want to start with the default settings cleared?" will appear. Select "Yes".


RETAS!PRO CoreRETAS HD

Do you want to start with the default settings cleared?

Q. The message "Failed to recognize Dongle" appears and I cannot start the RETAS!PRO series application.

(1) The dongle driver may not be installed correctly.
See the manual for the installation method.
Even if the driver was installed correctly, it may be damaged due to some reasons.

(2) Do you have the dongle connected via USB hub?
When using USB hub, use a self-powered type.
Power supply may become unstable under certain circumstances in those powered from the PC. Try to connect the dongle to the USB port on the CPU unit.

(3) Are you using the built-in USB port on the CPU unit?
Expansion USB ports implemented using third-party expansion cards are not supported.
Also, the dongle may not be recognized on the USB port built in the PC body if the port is branched using a USB hub etc. within the PC body. Connect to the USB port provided on the mother board.

Memory

Q. The error messages: "Area for "Undo" could not be secured due to memory shortage. ", "The command was not executed due to memory shortage. " appear.

(1) Is there any other application software running at the same time?
If you have an application software that needs much memory launched besides RETAS!PRO HD series application, first quit all launched applications (including RETAS!PRO HD), then restart RETAS!PRO HD series.

(2) Does your computer have enough memory?
If memory is limited, not only the sizes of images that can be processed may become limited but unexpected application troubles may occur. Memory expansion is recommended.

(3) Does your computer have enough space in HDD?
Because RETAS! HD series creates virtual memory on HDD, if there is not enough space in HDD, processing speed may be decreased or the application may become unstable. It is recommended that you make sure to have enough disk space.

Q. Is it possible to increase RETAS!PRO HD series processing speed by using multi-CPU or multi-core computers?

STYLOS HD, TraceMan HD, and PaintMan HD do not support multi-CPU or multi-core, so processing speed will not improve even if multi-CPU is used. CoreRETAS HD support multi-CPU and multi-core, so processing speed will improve if multi-CPU or multi-core PC is used. When using a multi-CPU or multi-core PC, change the number of threads in the [Setting the Preference] dialog box.

Monitor

Q. Colors are not displayed correctly.

(1) Is the number of colors set correctly for the monitor?
Check whether number of colors is set to full-color for the monitor.
For monitor setup, please refer to the manual.

(2) Due to dispersion, color might be displayed considerably different from display to display. Adjust brightness, contrast etc., and set it so that colors are displayed correctly. See attached manual of the product for display adjustment.

File

Q. I am trying to load an image file, but the Open dialog box does not appear. An image file created by other than RETAS!PRO HD cannot be loaded.

(1) Check the image format.
RETAS!PRO HD series can only load formats specified in the attached "List Of File Formats".
Check the format of the image file you cannot load.
It is also possible that extension is not matching the actual image format.

Q. I cannot open the image I created with RETAS!PRO HD using another software program.

(1) lif, svd, skf, dga, and cel format are RETAS!PRO series image file formats that can be used only in RETAS!PRO series applications.
To use image files with RETAS!PRO format in other software programs, use "Export" command and save the image in a compatible format.

Q. When loading a PICT file saved with Photoshop for Macintosh, noise appears in the image file.

(1) Is not the PICT file compressed using JPEG?
Graphic software other than RETAS!PRO HD series may provide JPEG compression function using QuickTime as option for saving.
Do not use this option to avoid compression noise.
Photoshop 5.0 or later has "NONE" as option for PICT compression. This "NONE" means no deterioration in image quality. Measures for compressing without compromising image quality are taken automatically, so even if you choose "NONE", the file size will be reduced.

Q. The image cannot be saved into the disk.

(1) Does the disk have enough empty capacity?
If empty capacity is extremely decreased, you may not only be unable to save images, but OS may become unstable as well. Always keep at least 2.5 GB of empty capacity.

(2) Check whether writing to the folder is permitted.
Overwriting is not possible if writing to the folder or file is not permitted.

Q. I deleted a file by mistake.

You may be able to recover using a file utility.
A file deleted by mistake may be recovered using disk utility tools.
However, this does not mean that recovery works in all cases, therefore, be careful when deleting files.
If the file is overwritten by mistake, there is no way to recover.
To avoid data loss due to disk troubles, it is recommended to make backup frequently.

Cel window

Q. I cannot use the drawing tools.

Check the opacity settings and the foreground color of the layer.

Q. I cannot reflect the pen pressure on the Pen (or Brush) tool.

(1) Are you not using the mouse to draw?
Pen pressure will not be reflected if mouse is used to draw lines.

(2) Do you have the pen pressure settings set to ON?
In CoreRETAS HD, set the [Reflect Pen Pressure on Thickness] button in the [Cel] window on.

CoreRETAS HD

Q. When I try to load an X-sheet, an alert dialog box "Unable to find the images in cel bank" appears and I cannot load the cel.

(1) Have you followed the notices about a scene folder system?
RETAS!PRO HD series manages files per folder according to the scene folder system.

(2) Did you move, rename, or delete the file after importing the images into cel bank?
If moving, renaming, or deleting images after creating the X-sheet, the link between the X-sheet and images is cut.
The "Rename" includes operation such as of adding an extension to a file.

(3) Did you move the X-sheet after creating it?
Isn`t the X-sheet located outside of the Scene Folder?
Moving the X-sheet after creation also cuts the link between the X-sheet and images.

(4) Did you import images from out of the scene folder where X-sheet is located or from an upper folder than the X-sheet folder?
It is not recommended to import images from out of the scene folder, images in other volume (Disc), of images in an upper folder than the X-sheet folder. Troubles may happen.
Place all images that the X-sheet needs into the scene folder as well as the X-sheet.

Q. I input a parameter into [Data Cell] on the X-sheet, but the value is not shown.

Did you input the cel number?
You cannot enter some parameters when [Cel Number] is not entered.
[Data Cell] with the [cel number] entered are indicated with light gray color.

Q. When I paste a parameter of the X-sheet, other parameters are pasted together.

Are you using "Selective Paste..."?
"Cut" and "Copy" commands copy all parameters of the "Data Cell" into buffer.
If "paste" is performed, all parameters are pasted.
When you need to paste only the parameter which you need, Select "Edit" -> "Selective paste...".

Q. I cannot apply Inbetweening using the numeric value of the X-sheet.

Are key frames set?
The [Inbetweening...] command applies inbetweening between key frames within the selection. If there is only one key frame or no frame in the selected range, auto-inbetweening is not performed.
Depending on the inbetweening types, you must use [Non-continuous Key Frames] instead of [Continuous Key Frames] to apply inbetweening.

Q. I increased the parameter value of random input to make large blurring, but blur is not as expected.

The input parameter in "Random Input..." only specifies the maximum value of it, so it does not mean that the blur becomes larger in pace with the input value.

Q. When overlapping the layer, the background becomes visible as if layers were transparent.

Layer transparency is a composite ratio of the object layer against the result of previous layers composition.
For instance, when overlapping layer A and B and set layer A's transparency of 100% into 0% while its reverse for B, this phenomenon happens. In such cases, use the [Multi Camera] function.

Q. When I changed cel scale and did camera work, movement has become strange.

This phenomenon may happen easily when a different speed has been set when inbetweening cel [scale] and [position].
Make inbetweening settings same and try to inbetweening again.

Q. I inbetweened TU/TB by "Uniform" Speed, but the actual speed seems to have accelerated.

TU/TB in CoreRETAS HD is done by increasing or decreasing the scale parameter. This scale parameter shows a ratio of one side of cel or camera.
Therefore if inbetweening by "Uniform" Speed, the area of the cel or camera changes by the square. Using [Scale Proportion] is recommended.

Q. The imported cel size does not fit in the Stage.

Change the stage size with "Edit" -> "Preference..." so that the material fits.
The Stage size is limited by memory (to be precise, the memory that can be allocated to CoreRETAS HD).
To process large images, expand memory and allocate as much memory for CoreRETAS HD as possible.

Q. Outline does not become clear even performing smoothing.

Have you configure [Smoothing] in the [Rendering Settings] dialog box (or the [RAM Preview] settings dialog box) appropriately?
If [scale] is changed or focus treatment put to mono-traced cel, an interpolation between pixels occurs. [Smoothing] does not have any effect on such images. Therefore, when [smoothing] mono-traced images, do [smoothing] first, then change the scale or put focus treatment.
Normally, specify [Auto] for configuration of [Rendering Settings] dialog box (to check, [RAM Preview] setting dialog box) to prevent such kind of problems. If there is no special reason, set "Auto".

Q. When exported, white parts of BG (Background) are painted in black.

Are you not using transparent color of white (RGB=255,255,255) in BG image?
When the white parts contained in the background is set to RGB=255,255,255 for color adjustment, this phenomenon occurs.
Change the BG layer transparency into "Completely Opaque".

Q. The image is not filtered even if using the Effect Layer.

(1) Is the [Layer Switch] of [Effect Layer] not turned off?

(2) Are the [parameter] and [Setup items] in [Effect layer] set correctly?
For some effect filters, you must specify [Parameter] and [Settings].
Such filters may not be effective unless they are correctly configured.

Q. The "Backlight" doesn't shine well.

Mask that shades off the parts where light is extended is required for masking images used with [Backlight] filter.
[Backlight 2] does not need to shade the image, and light extension can be controlled only with filter settings.

Q. It doesn't shine well though I tried to make background shine using Backlight.

When an image(s) is put before the image where [Backlight] filter is set, the Backlight has not effect on the layer above.
Therefore even if you make the Backlight stronger, it does not seem to shine because the light cannot surround the image.
When you want to use Backlight for BG, create a mask for the part without character first, then create Backlight mask based on it and import it as top layer or use [BG Light].

Q. The image doesn't get out of focus even when the [Focus] filter is put.

Did you change the scale?
This phenomenon may occur when you changed the scale value in camera work.
CoreRETAS HD first blurs the cel using the [Focus] and the changes the [Scale]. For example, when [Focus] is 3 and [Scale] is 50, the result has 1.5 blur.
When you use both focus and scale change camera work, modify the focus according to the scale.
For details, see "Focus" in Chapter 5 "Application Description: Special Effects and Camera Effects".

Q. Motion Blur effect cannot be seen.

Motion blur effect is applied according to the change from the frame right before when "camera or cel coordinates has moved", "when the scale of camera or cel is changed", "when camera or cel is rotated", etc.
Therefore, Motion Blur effect cannot be seen when there are no moves in the camera.

Q. When images exported by CoreRETAS HD is opened in Photoshop, the colors seem to be slightly changed.

Photoshop 5.0 and later may converts the color space into sRGB when opening images, so colors may change slightly. For more information, please refer to the Photoshop manual.

Q. RLA images cannot be loaded.

RLA plug-in supports only images in which each RGB channel has a color depth of 8 bits.
16 bits is not supported.

Q. Images and outlines are not shown in the [Stage] window.

Is [CapsLock] off?
When [CapsLock] is on, [Caps Lock] is shown on the title bar of the [Stage] window and images and outlines are not shown on the Stage even if [Image] button or [Outline] button is set to ON. Cancel [CapsLock] using the keyboard.

Numbers

100Frame 594
12 Field (USA) 594
3D Camera Work 288
3D X-sheets 288

A

About 3D Camera Work 288
About color styling 584
About Inbetweening and Key Frames 42
About Motion blur effect 406
About Multi-Camera 438
About Nesting 422
About Parent-Child Pegbars 436
About Pegbar 40
About Shooting 212
About the Cel Bank 38
About the File Browser 54
About the Layer Settings 39
About the Scene Folder 44
About the Shooting X-sheet 66
About the stage window 104
About the X-sheet and Stage 36
Acceleration 243, 559
Acceleration >> Deceleration 244, 559
Add Compositing 278
Add Effect 308
Adding Foreground Color to Selection 472
Adding Several Effects Layers 310
Adjusting the Position Displacement 167
Adjusting the Position Displacement 138
Adjusting the Starting Position of a Sound File (shooting X-sheet) 103
Airbrush Effect (menu) 481
Alpha 388
Alpha Blur 335
Alpha Blur V5 325
Alpha Channel 275
Alpha Channel (Color Matte) 277
Alpha Channel (Invert) 276
Alpha, Alpha plane, Alpha channel 592
Anchor Frame and Margins 272
Animation 594
Anti-Alias 592
Applying Effects 308
Applying the Motion Blur Effect 406
Assigning a keyboard shortcut 519
Auto Inbetweening 234
Auto Inbetweening Sections 216
Auto Refresh 264
Automatic Input of Cel Numbers 79

B

B Spline Graph 557
Background Back Lighting 359, 402
Backlight 357, 394, 596
Backlight 2 358, 400
Backlight Compositing 280
Backlight Images and Each Parameter 396
Basic Format of Scene Folder Names 53
Batch Export dialog box 505
Batch Export of a Number of Scenes 502
Batch Input of Parameters 84
Before Contacting This Company 599
Blur 329
Blur (Heavy) 329
Blur (Light) 330
Book 596
Box Blur 334
Brightness 371
Browsing the Basic Information 57
Browsing the Handwriting Memos 62
Browsing the Images 56
Browsing the Message Board 60
Browsing the Schedule 58
Burn 282
Burn (Linear) 282

C

Calling Up a Marker 95
Calling Up an Optional Frame 94
Calling Up the Current Frame 94
Canceling and Re-starting Work 520
Carrying out Layer Settings 136, 165, 192
Carrying out the Follow 194
Carrying out the SL (Slide) 203
Cel 515, 594
Cel Auto Arrange 82
Cel Bank 536
Cel Bank Menu 538
Cel Bank Palette 33
Cel Bank Resolution Settings dialog box 539
Cel BG 595
Cel Focus and Camera Focus 404
Cel Number 594
Cel Scene Folder 45
Cel Window (Alpha Edit Mode) 485
Cel Window (Light Table Mode) 483
Cel Window (Normal Mode) 456
Center line 592
Changing a Layer Name (shooting X-sheet) 90
Changing the Camera Clipping Settings (shooting X-sheet) 97
Changing the Cel Bank Name (shooting X-sheet) 93
Changing the Cel Number 93
Changing the Cel Number (shooting X-sheet) 93
Changing the Pegbar Name (shooting X-sheet) 91
Changing the Results of the Effects 316
Changing the View Size (shooting X-sheet) 96
Channel Blur 332
Check materials 596
Clear cache 492
Clearing a Selection 474
Closing X-sheets (shooting X-sheet) 100
Collapsing the X-sheet 96
Color Balance 365
Color Chart, Chart 594
Color Plane 302
Color Replace 375
Color separation (line) 595
Color Styling 594
Coloring 372
Combining Effects to Create New Effects 313
Compatibility of images 589
Compatibility of X-sheets 588
Completely Opaque 276
Compositing Mask 1 408
Compositing Mask 2 410
Compositing Mask Processing 408
Compositing Mode 278
Computer terms 593
Concerning Whether or Not There is an X-sheet 121
Conditions for Applying Inbetweening 241
Confirming Movement on the Stage 112
Confirming the Finished Animation 153, 181, 208
Confirming the Materials using the File Browser 119, 157, 183
Confirming the Preview 181
Connecting the Dongle 26
Context menu 593
Continuous Key Frames and Non-continuous Key Frames 218
Contrast 366
Converting a Drawing X-sheet to a Shooting X-sheet 74
Copying an Effects Layer 312
Copying and Pasting Parameters 86
CoreRETAS HD 604
CoreRETAS HD Main Screens 32
CoreRETAS HD menu (Mac OS X) 533
Corner Pin 379, 418
Corner Pin V5 321
Creating a New Shooting X-sheet 72
Creating a Range Selection Using Markers 95
Creating a Selection Range (shooting X-sheet) 80
Creating a Shooting X-sheet from a Paper X-sheet 122, 158, 184
Creating New Drawing Scene Folders and Cel Scene Folders 46
Cross Light 349
Cushion 596
Cut 594

D

Darker Compositing 278
Deceleration 243, 559
Deceleration >> Acceleration 244, 559
Deleting a Cel Bank (shooting X-sheet) 92
Deleting a Layer (shooting X-sheet) 89
Deleting a Line: Eraser Tool 460
Deleting a Pegbar (shooting X-sheet) 91
Deleting a Sound File (shooting X-sheet) 102
Deleting an Effects Layer 312
Deleting Frames (shooting X-sheet) 88
Dialog box 593
Difference (Absolute Value) Compositing 279
Difference between Add Compositing and Backlight Compositing 284
Diffuse 351
Direction 595
Distortion 376
Dodge (Linear) 282
Dodge color 281
Dongle Replacement 598
Double click 591
Double exposure / Dissolve 596
DPI 593
Drag 591
Drag & drop 591
Drawing 603
Drawing Scene Folder 45
Drawing Shapes: Curve Tool 461
Drawing Shapes: Line Tool 461
Drawing Shapes: Polyline Tool 463
Drawing Shapes: Shape Tool 462
Drawing Tool Options 464

E

Edit menu 525
Editing the keyboard shortcuts 519
Effect menu 530
Effect palette 35, 566
Effects: Airbrush Effect Tool 481
Effects: Airbrush Tool 480
Effects: Gradient Tool 482
End points 592
Exchanging data with other OS's 585
Exchanging data with other software programs 586
Exclusion 282
Expanding the Selection 473
Expanding the X-sheet 96
Explorer 593
Export 494, 513
Export dialog box 496
Export Queue Window 35, 570
Export to movie 492
Exporting the Scene 148
Exposure Effects 454
Extension 593

F

F.I. (Fade In) 596
F.O. (Fade Out) 596
Fade in (Fade out) 454
FAQ 600
Features of Add Compositing 283
File 513
File (Glossary) 602
File Browser 572
File menu 524
Fill (Menu) 477
Finder 593
Fisheye Lens 383
Fisheye Lens 2 384
FIX 595
Flash Format Export 506
Flipping Horizontally 475
Flipping Vertically 475
Focus 333, 404
Focus V5 323
Follow 245, 560
Follow (Glossary) 595
Follow Movement Direction 252
FPS 593
Fractal Noise 347
Frame 594

G

Gaussian Blur 331
Gaussian Blur V5 320
Glossary 592
Glow 350
Gradation Paint 372
Graph 242, 557
Graphics related 592

H

Hard Light 280
Help menu (Windows) 533
Highlight markup 595
HSV 363, 592

I

Image Distort 377
Image Distort 2 378
Image Editing 456
Inbetweening 226
Inbetweening between Three or More Key Frames 222
Inbetweening Palette 34, 552
Inbetweening Type menu 557
Inch 593
Inputting a Memo (shooting X-sheet) --- 99 99
Inputting Parameters in Data Cells 78
Inserting a Frame by Pasting 87
Inserting a Layer (shooting X-sheet) 89
Inserting a Pegbar (shooting X-sheet) 90
Inserting a Specified Number of Frames 88
Inserting Frames (shooting X-sheet) 88
Installing the Mac OS X Version Application 22
Installing the Mac OS X Version HASP Driver 16
Installing the Windows Version Application 20, 25
Installing the Windows Version HASP Driver 14
Invert 369
Invert V5 327

K

Key 594
Key Frame Sections 214
Key Frame Setting of X-axis Only and Y-axis Only 220
Key frames 214

L

Layer Settings Palette 33, 534
Layering Processing 293
Layout 594
Left click 591
Lens Blur 341
Lens Flare 352
Level Adjust 367
License 512
Light 349
Light Blur V5 328
Light table 595
Light table tool 484
Lighter Compositing 278
Line Width Control 421
Linear Light 281
Linking the Parameter Switching 79
List of Effects 320
Loading a Sound File (shooting X-sheet) 102
Loading Folders that are to be the Subject of Browsing 55
Loading Materials to the Cel Banks 125, 160, 186

M

Manipulator 296
Manual Inbetweening 226
Manual Inbetweening and Auto Inbetweening 226
Manual Sections 215
Mask Modes 274
Mask Replace 392, 412
Mask Replacement Filter 412
Memory 518
Memory (Glossary) 601
Menu 524
Method of Reading the X-sheet 70
Method of Using Backlight Filter 394
Mirror Image 385
Model sheet 595
Monitor 601
Monorization 362
Mosaic 393
Mosaic V5 324
Motion Blur 336
Motion blur effect 406
Motion Path 254
Motion Path Palette 34, 564
Motion Path Sections 216
Mouse and Pen Tablet Operation 590
Movie 594
Movie Export dialog box 499
Moving the Screen View: Hand Tool 459
Moving to the First Frame 94
Moving to the Last Frame 94
Multi-Camera 438
Multi-plane 596
Multiply Compositing 279

N

Name of mouse parts 590
Name of pen tablet parts 590
Nesting 422
Nesting Procedure 424
Noise 345
Noise V5 322
Normal Compositing 278
Notes on cut & paste 580

O

O.L. (Over lap) 596
Offset 268
Open (shooting X-sheet) 100
Opening an X-sheet Template (shooting X-sheet) 101
Others 388
Out-of-Focus Effect 405
Overlay 280

P

Painting: Brush Tool 479
Painting: Eyedropper Tool 476
Painting: Fill Tool 477
Painting: Replacing Line Color (Menu) 478
PaintMan layer structure 581
PAN 595
Paraffin Overlay 373
Paraffin Overlay and Para Multi 450
Paraffin Overlay Filter 450
Parent-Child Pegbars 302, 436
Partial Blur 338
Partial Radial Blur 339
Pasting only Selected Parameters 87
Pegbar 596
Perspective Viewing (Perspective) 292
Pin Light 281
Pinch 376
Pinhole 346
Placing a Marker 94
Playing a Sound File (shooting X-sheet) 103
Plug-in 517
Point requiring Caution when using Motion Blur 407
Polar Coordinates 386
Polynomial 252, 563
Pop-up menu 593
Posterization 368
Preferences 512
Preparing the Materials 116, 156, 182
Preview by drawing of the current frame 488, 489
Preview using Movie Image 490
Preview using quick rendering: 489
Preview using RAM preview: 490, 491
Preview using Still Images 488

Q • R

Quitting CoreRETAS HD 155
Ram Preview of a selected range only 491
RAM Preview Settings Dialog Box 493
Random Inbetweening 260
Random Sections 217
Raster format 592
Rasterize 592
Redo 520
Reducing the Selection 473
Rendering 517
Rendering in Flash format 506
Rendering in SWF format 506
Rendering menu 531
Rendering of still images and inbetweens 494
Rendering of the movie 495
Rendering of the still image 494
Rendering Settings dialog box 500
Rendering Window 33, 568
Resetting a Layer (shooting X-sheet) 90
Resetting a shortcut 519
Resolution 592
Retake (direction) 594
RETAS! Pro website 598
Reversing a Selection 474
Revert 521
RGB 364, 592
Right click 591
Ripple 387
RLA File Reading 442

S

Save (shooting X-sheet) --- 100 100
Save As (shooting X-sheet) 100
Saving an X-sheet as a Template(shooting X-sheet) 101
Saving Copies of X-sheets (shooting X-sheet) 100
Saving the Shooting X-sheet 154
Saving X-sheets in CoreRETAS Ver.5 Format 100
Scale Proportion 246, 561
Scene folder 594
Scene Folder Application Rules 53
Scene Folder Structural Elements 50
Scene table, Schedule 594
Screen Compositing 279
Screen View Adjustment: Tool Bar 458
Scrolling the Stage View 107
Seeds 304
Select All Layer Images (shooting X-sheet) 93
Select out-of-range color 473
Selecting a PSD Image 93
Selecting All 474
Selecting All PSD Images 93
Selecting Other Than Foreground Color 472
Selecting the Foreground Color 472
Selection Tool Options 468
Selection Tool Options (shooting X-sheet) 81
Selection: Lasso Tool 466
Selection: Magic Wand Tool 467
Selection: Rectangle Selection Tool 466
Selection: Selection Brush Tool 467
Sequence number 594
Set Position dialog box 484
Setting a Parent Pegbar 437
Setting an Upper Cel and Lower Cel 48
Setting Multi-Cameras 440
Setting the Animation Information (Board) 98
Setting the Preferences 512
Setting the T.U. (Track Up) 174
Setting the Work Information (shooting X-sheet) 98
Setting Up the Monitor 27
Shadow 356
Shadow markup 595
Shadow V5 326
Sharp 342
Sharpen (Heavy) 343
Sharpen (Light) 344
Shooting 596
Shooting Flow: FIX (Fixed) 116
Shooting Flow: T.U. (Track Up) 156
Shooting X-sheet Window 32,540
Shortcuts 576
Shortcuts (Windows) / Alias (Mac OS) 593
Showing All Frames on the Stage 110
Showing All Key Frames on the Stage 110
Showing Grid Lines on the Stage 108
Showing the Frame Track on the Stage 111
Showing the Image on the Stage 109
Showing the Image Outline on the Stage 109
Showing the Motion Path on the Stage 111
Showing the Pegbar on the Stage 107
Showing the Sound File Information (shooting X-sheet) 103
Showing the Stage in 3D View 113
Showing Transparent Areas: Tool Bar 459
Sine (Specify Amplitude and Cycle) 251, 562
Sine (Specify Starting and Ending Points) 248, 562
Single-dot Drawing: Pencil Tool 460
Slanting light 596
Smoothing 286, 389
Soft Blur 337
Soft light 280
Sort 593
Special Effects 595
Sphere 382
Splined Inbetweening 253
Splined Sections 215
Stage 516
Stage Menu 529
Stage View Zoom In and Zoom Out 106
Stage Window 37, 544, 577

Starting Up CoreRETAS HD 118
Start-up 600
Still Image Export dialog box 498
Stopping Playback of a Sound File (shooting X-sheet) .. 103
Story Board 594
Subtract Compositing 279
Swapping the Order of the Effect Layers 311
SWF Export Dialog Box 508
Swirl 381

T

T.B. (Track back) 596
T.U. (Track Up) 595
Tab (control) 593
Technical Information 580
Text 390
The Four Views of the Stage Window 291
Thumbnail 593
Tiling 420
Tint 374
Tone Adjustment 362
Tone Curve 370
Transforming an Image 475
Transparency markup 595
TV (safety) frame 595
Two Types of Scene Folders 45
Two Types of X-sheets 64
Types of Compositing Modes 278
Types of Inbetweening 242
Types of Key Frame Sections 215

U

Understanding the File Browser 54
Understanding the Scene Folder 44
Understanding the Shooting X-sheet 64
Understanding the Stage Window 104
Undo 520
Uniform 242, 557
Uniform with Acceleration and Deceleration 245, 561
Uninstalling the Mac OS X Version HASP Driver 19
Uninstalling the Windows Version HASP Driver 15
Unit terms 593
Unsharp mask 342
User Registration 28, 598
User Support 598

V • W

Vector format 592
Ver.5 Compatible 320
Vivid Light 281
Volume Light 360
White Transparent 274
Window 534
Window menu 532

X • Z

X-sheet 514
X-sheet (Glossary) 603
X-sheet Input 1
  (Automatically Inputting the Cel Numbers) 188
X-sheet Input 1
  (Inputting Cel Numbers to the A Cel) 128, 162
X-sheet Input 2 (Inputting Cel Numbers to
  the Background) 133, 164, 191
X-sheet menu 527
X-sheet Window 36, 576
X-sheet, sheet 594
Zigzag 380
Zooming In and Zooming Out: Tool Bar 457
Zooming In and Zooming Out: Zoom Tool 457

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